PB89-128300

Superfund Record of Decision (EPA Region 2)
Nascolite Corporation, New Jersey
(First Remedial Action), March 1988

(U.S.) Environmental Protection Agency
Washington, DC

Dec 87

U.S. Department of Commerce
National Technical Information Service
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15. Supplementary Notes

16. Abstract (Limit: 200 words)

The Nascolite Corporation site is located in the cities of Millville and Vineland, Cumberland County, New Jersey. The 17.5 acre site, over one-half of which is wooded, is in an area zoned as residential and industrial. Several homes exist near the site and rely on potable wells for drinking water. Between 1953 and 1980, the Nascolite Corporation manufactured polymethyl methacrylate (MMA) sheets, commmonly known as exiglass. Waste residues from the distillation of scrap acrylic, a manufacturing -product, were stored in buried tanks onsite. Perforations in one of the tanks excavated indicated the possibility of liquid waste leaking into the soils. In 1981 and 1983, the New Jersey Department of Environmental Protection (NJDEP) sampled onsite and the ground water found in significant concentrations of VOCs. NJDEP identified over 100 fifty five-gallon drums and several buried tanks on the site, most of which had been subsequently removed from the site by the property owner. The remaining drums were removed by EPA. The primary contaminants of concern affecting both ground water and soil include: VOCs, base/neutrals, and MMA.

The selected remedial action for this site includes: ground water pump and onsite treatment using a method determined through pilot testing with reinjection into the
(See Attached Sheet)

17. Document Analysis a. Descriptors

Record of Decision
Nascolite Corporation, NJ
First Remedial Action
Contaminated Media: gw, soil
Key Contaminants: VOCs, organics

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

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EPA/ROD/R02-88/059
scolite Corporation, NJ
First Remedial Action

16. ABSTRACT (continued)

aquifer; performance of additional soil and onsite building studies to determineappropriate future remedial measures; and provision of an alternate water supply for potentially affected residents. The estimated captial cost for this remedial action is $609,000 with annual O&M of $266,000.

PB89-128300

United States
Environmental Protection
Agency

Office of
Emergency and
Remedial Response

EPA/ROD/R02-88/059
December 1987

EPA

Superfund Record of Decision:

Nascolite Corporation, NJ

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DECLARATION STATEMENT

RECORD OF DECISION

REMEDIAL ALTERNATIVE SELECTION

SITE NAME AND LOCATION

Nascolite Corporation, Cities of Millville and Vineland, Cumberland County, New Jersey

STATEMENT OF PURPOSE

This decision document presents the selected remedial action for the Nascolite Corporation site, developed in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §9601 et seq., and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300.

STATEMENT OF BASIS

I am basing my decision primarily on the following documents, which are contained in the administrative record and characterize the contamination and evaluate long-term remedial alternatives for the Nascolite site:

- Remedial Investigation Report, Nascolite Corporation Site, prepared by TRC Environmental Consultants, June 1986
- Feasibility Study Report Nascolite Corporation Site, prepared by TRC Environmental Consultants, July 1986
- Proposed Remedial Action Plan, Nascolite Corporation Site, March 1988
- The attached Decision Summary for the Nascolite Site
- The attached Responsiveness Summary for the Nascolite Site, which incorporates public comments
- Staff summaries and recommendations

DESCRIPTION OF SELECTED REMEDY

The remedial alternative presented in this document is the first operable unit of a permanent remedy for the Nascolite site. It focuses on ground water contamination in the aquifer underlying the site. Additional studies to address soil contamination will be performed prior to selecting a source control remedy.

The first operable unit consists of the following components:

- Ground water extraction with on-site treatment and reinjection of treated effluent;
- Additional studies to determine the appropriate remedial measures for contaminated soils and on-site buildings; and
- Provision of an alternate water supply for potentially affected residents.

DECLARATION

Consistent with the Comprehensive Environmental Response, Compensation, and Liability Act, as amended, and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 CFR Part 300, I have determined that the selected remedy is protective of human health and the environment, attains federal and state requirements that are applicable or relevant and appropriate for the ground water operable unit, and is cost-effective. Furthermore, this remedy satisfies the preference for treatment that reduces the toxicity, mobility, or volume as a principal element. Finally, I have determined that this remedy utilizes permanent solutions and alternative treatment technologies to the maximum extent practicable.

The State of New Jersey has been consulted and agrees with the selected remedy.

3-31-88
Date

Christopher J. Daggett
Regional Administrator

SUMMARY OF REMEDIAL ALTERNATIVES SELECTION

NASCOLITE CORPORATION SITE
CITIES OF MILLVILLE AND VINELAND, NEW JERSEY

SITE LOCATION AND DESCRIPTION

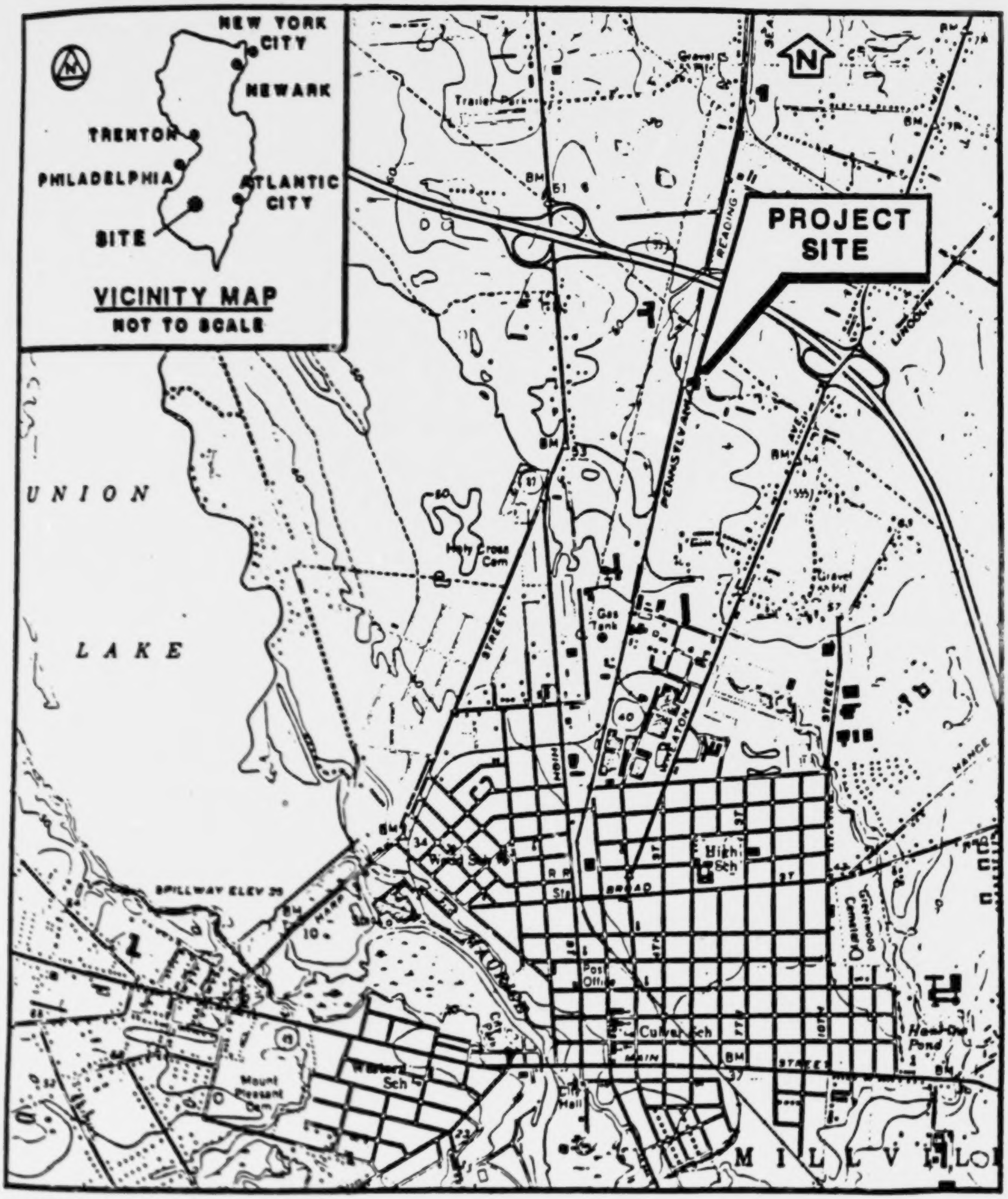
The Nascolite site is located on Doris Avenue in the cities of Millville and Vineland, Cumberland County, New Jersey (see Figure 1). The site is situated near the intersection of U.S. Route 55 and Wheaton Avenue. During it's operation, the Nascolite Corporation was a manufacturer of poly methyl methacrylate (MMA) sheets, commonly known as acrylic or plexiglas. The Nascolite property is delineated as Lots 41, 41A and 42 of Block 127 in Millville and Lot 2, Block 1121 in Vineland. These parcels of land cover an area of about 17.5 acres, of which over half is wooded. Approximately seven acres of the property were used for manufacturing and support activities. Six buildings on the site served as the production facility, laboratory and offices for the company (see Figure 2).

The area surrounding the Nascolite site is zoned as residential, and industrial. Several homes are located to the east and southeast along Wheaton and Doris Avenues. An apartment complex borders the southern property line. The home of the site owner is located within the site boundaries. Conrail railroad tracks lie on the site's western border, and a scrap yard lies on the western side of these tracks. This scrap yard was incorporated into the study area. A cement casting company is located to the northwest of Nascolite.

SITE HISTORY

The Nascolite plant was constructed in 1952 and was operated between 1953 and 1980. In its production of poly MMA, Nascolite used both scrap acrylic and liquid MMA monomer. The scrap material was reclaimed through a depolymerization process, which included several distillation steps. Waste residues from the distillation were found in several previously buried tanks in the north plant area during site investigation. Perforations in one of the tanks excavated indicated the likelihood of liquid waste leaking into the soils.

The New Jersey Department of Environmental Protection (NJDEP) began investigating the Nascolite site in 1981. In September 1981, Nascolite signed an Administrative Consent Order with NJDEP which called for the installation of three monitoring wells and the collection of groundwater samples. The wells were installed in November 1981, and groundwater samples were collected for analyses in the fall of 1981, and again in February 1983. Both analyses showed significant concentrations of volatile organic chemicals in all three wells. During the second sampling effort, a strong

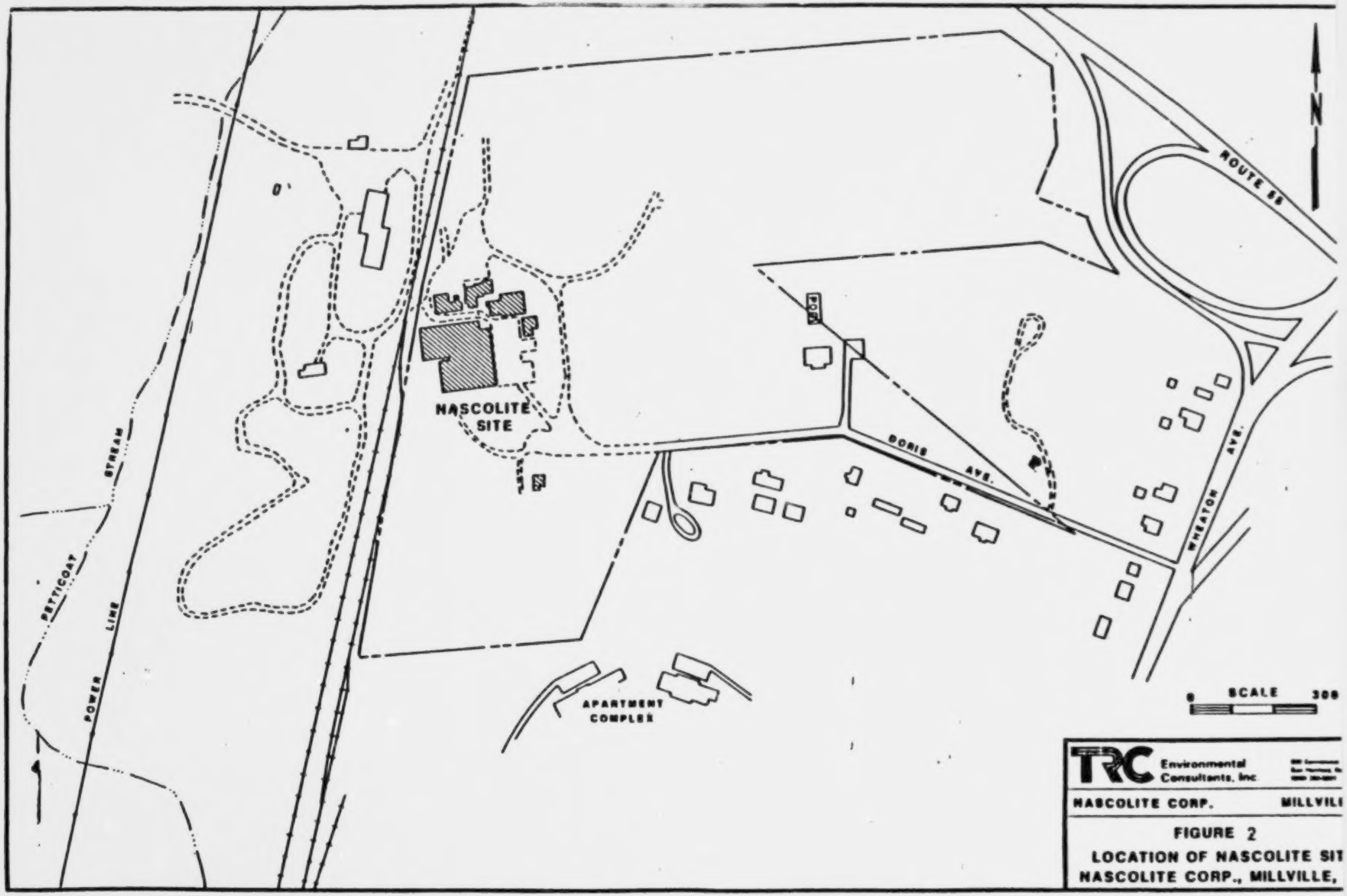


NEW YORK CITY
NEWARK
TRENTON
PHILADELPHIA
ATLANTIC CITY
SITE
VICINITY MAP
NOT TO SCALE
N
PROJECT SITE
READING
PENNSYLVANIA
LINCOLN
MAIN
STREET
Trailer Park
Gravel Pit
Holy Cross Cem
Gas Tank
High Sch
BROAD
Post Office
Culver Sch
City Hall
Wallace Sch
Mount Pleasant Cem
Greenwood Cemetery
MAURICE
SPILLWAY ELEV 25
UNION
LAKE
MILLVILLE

FROM MILLVILLE, NJ 7 1/2'
USGS TOPOGRAPHIC MAP

0 5000 FT
SCALE

FIGURE 1 SITE LOCATION MAP


PETTICOAT
STREAM
POWER
LINE
NASCOLITE SITE
APARTMENT COMPLEX
DORIS AVE.
WHEATON AVE.
ROUTE 55
N
0 SCALE 300

TRC Environmental Consultants, Inc.

NASCOLITE CORP. MILLVILI

FIGURE 2

LOCATION OF NASCOLITE SIT
NASCOLITE CORP., MILLVILLE,

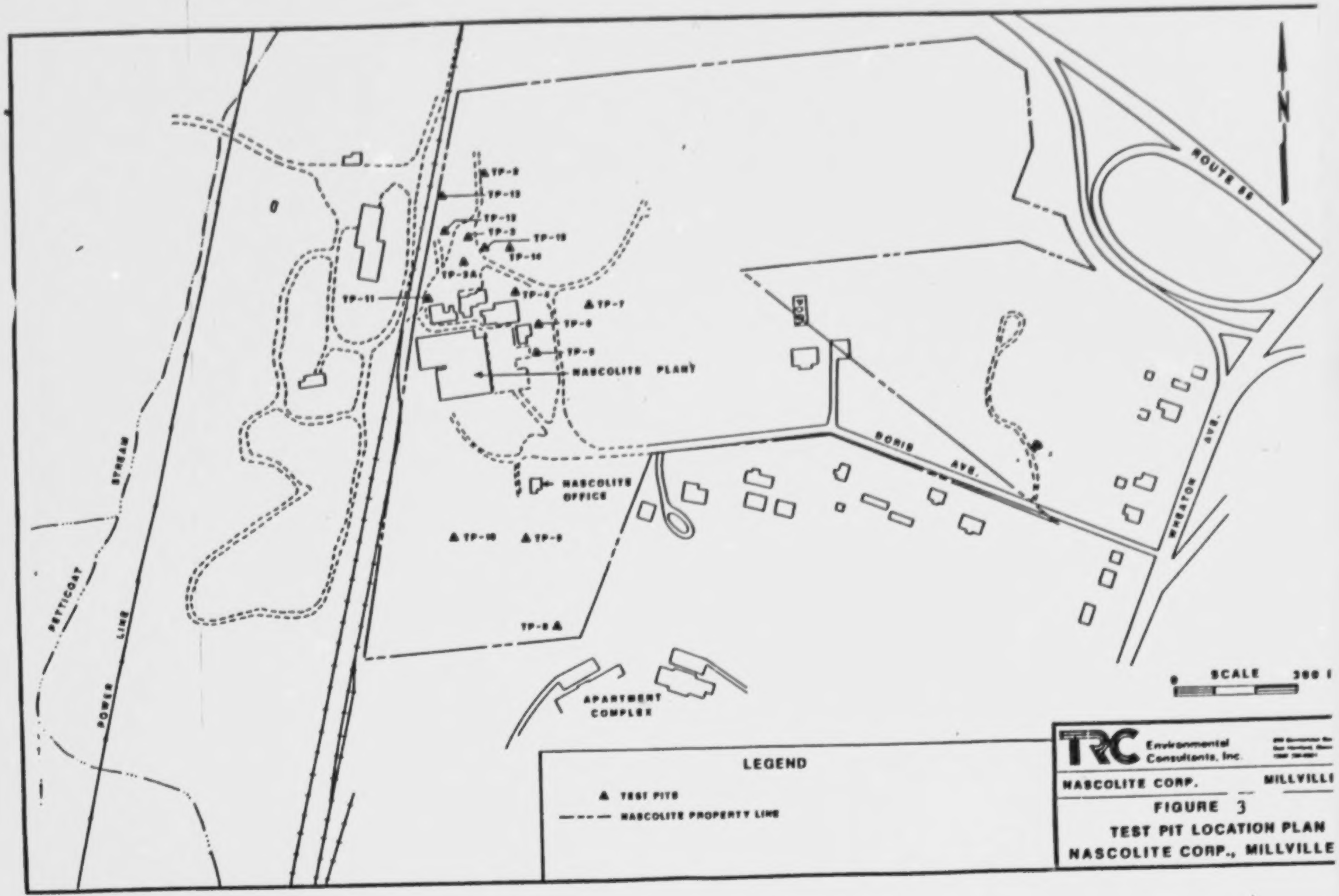
"sweet" odor eminated from the northernmost well. In addition, the aqueous sample contained a red plastic material which hardened after being extracted from the well. A strong fuel-like odor was evident in the other two wells.

NJDEP had identified over one hundred 55-gallon drums and several buried tanks on the site. At the initiation of the remedial investigation, most of the tanks and drums had been removed from the site by the property owner. The remaining drums were subsequently removed by the Environmental Protection Agency (EPA).

CURRENT SITE STATUS

The remedial investigation activities at the Nascolite site were conducted during several separate investigative phases between February 1985 and June 1987. The first phase of the investigation was performed between February and April 1985. Work completed at this time included the installation of twelve monitoring wells. Sampling and analysis was performed on these wells, as well as seven privately owned wells, the City of Millville's well, waste material on-site, and the surface and subsurface soils. Analysis of samples taken from these wells showed significant levels of contamination, and that additional monitoring wells were needed to delineate the extent of the contamination. Seven wells were installed and sampled in November and December 1985. In February 1987, nine private potable wells near the site were sampled. In June 1987, several on-site monitoring wells were sampled for the purpose of conducting radiation analyses. Analysis of these samples showed that there is no radiation contamination at Nascolite.

Fifteen test pits were excavated and nineteen soil borings, which were later completed as monitoring wells, were drilled to characterize the subsurface soils. The test pit and soil boring locations are shown on Figure 3. The drilling program included both shallow and deep borings. The fourteen shallow borings were advanced approximately fifteen feet below the water table. Four of the deep borings, 7D, 9D, 15D, and 17D, were approximately 60 feet deep, and boring 4D was 42 feet below the water table. Contamination, which primarily consisted of base/neutrals, volatile organics, and MMA, was found in the 1-acre north plant area and at two smaller hot spot areas (see Figure 5). Soil contamination was found to be beneath the water table in places within the site boundaries.


PETTICOAT
STREAM
POWER
LINE
TP-2
TP-13
TP-12
TP-3
TP-15
TP-14
TP-2A
TP-11
TP-4
TP-7
TP-6
TP-5
NASCOLITE PLANT
NASCOLITE OFFICE
TP-10
TP-9
TP-8
APARTMENT COMPLEX
DORIS AVE.
WHEATON AVE.
ROUTE 55
N
0 SCALE 300 F
LEGEND
▲ TEST PITS
— - — NASCOLITE PROPERTY LINE

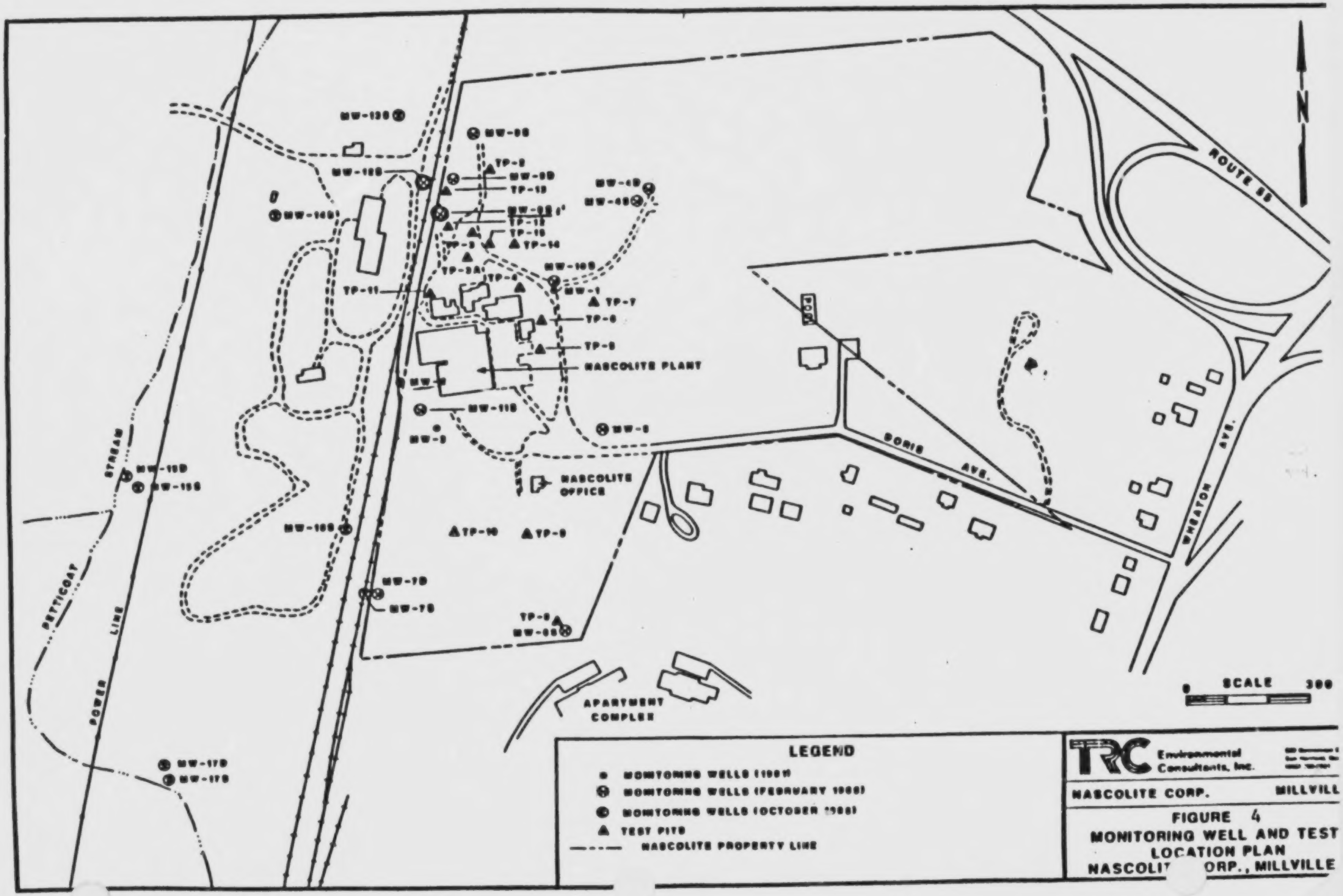
TRC Environmental Consultants, Inc.

NASCOLITE CORP. MILLVILLI

FIGURE 3

TEST PIT LOCATION PLAN

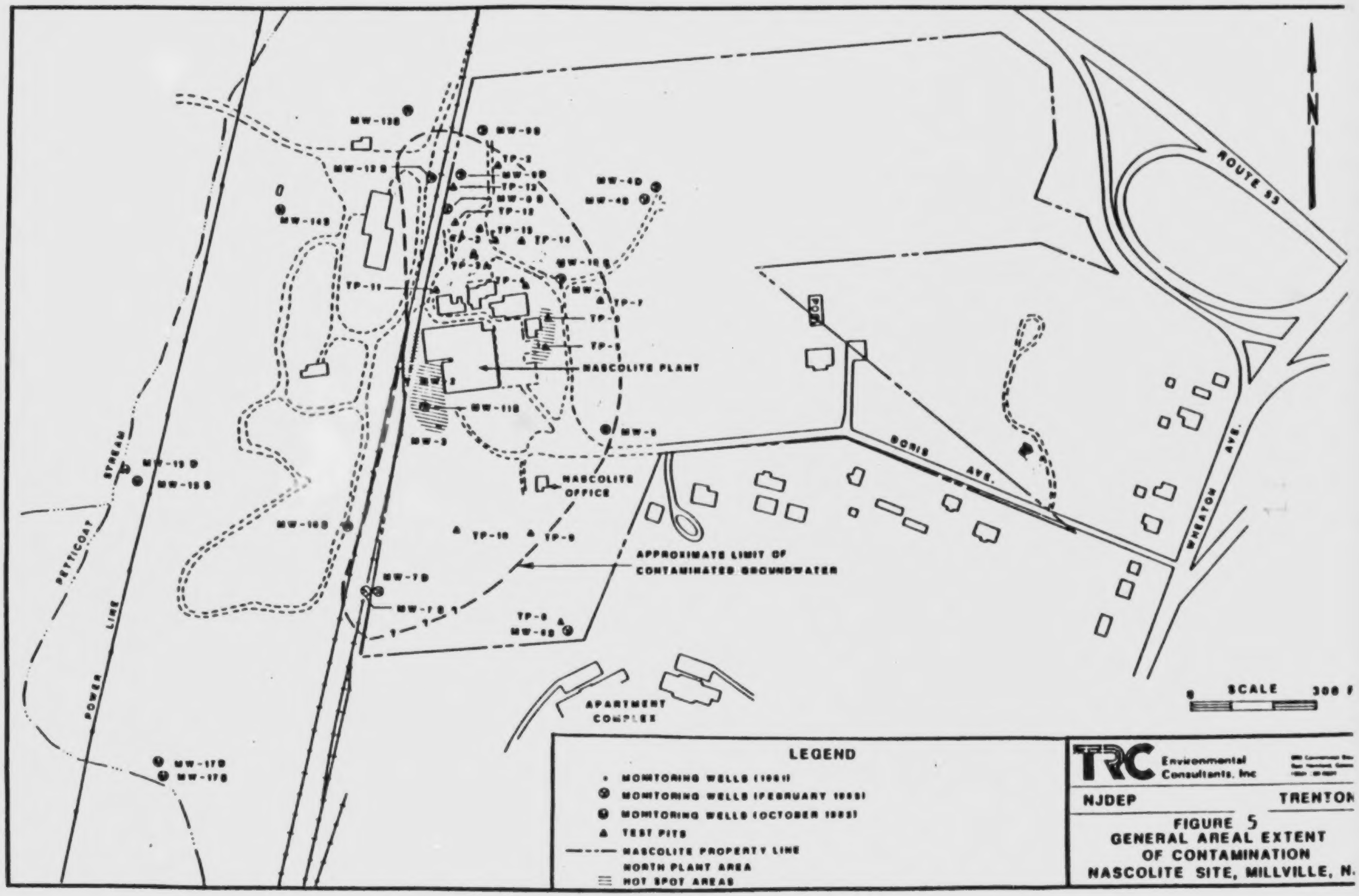
NASCOLITE CORP., MILLVILLE


MW-13S
MW-9S
TP-2
MW-9D
TP-13
MW-4D
MW-4S
MW-12S
MW-3S
TP-12
TP-15
TP-3
TP-14
TP-3A
TP-4
MW-10S
MW-1
TP-7
TP-6
TP-5
TP-11
MW-16S
NASCOLITE PLANT
MW-2
MW-11S
MW-3
MW-5
NASCOLITE OFFICE
STREAM
MW-15D
MW-15S
MW-18S
TP-10
TP-9
MW-7D
MW-7S
TP-8
MW-6S
PETTICOAT
POWER
LINE
MW-17D
MW-17S
APARTMENT COMPLEX
ROUTE 55
DORIS AVE.
WHEATON AVE.
N
0 SCALE 300
LEGEND
MONITORING WELLS (1981)
MONITORING WELLS (FEBRUARY 1986)
MONITORING WELLS (OCTOBER 1986)
TEST PITS
NASCOLITE PROPERTY LINE

TRC Environmental Consultants, Inc.

NASCOLITE CORP. MILLVILL

FIGURE 4
MONITORING WELL AND TEST
LOCATION PLAN
NASCOLIT ORP., MILLVILLE



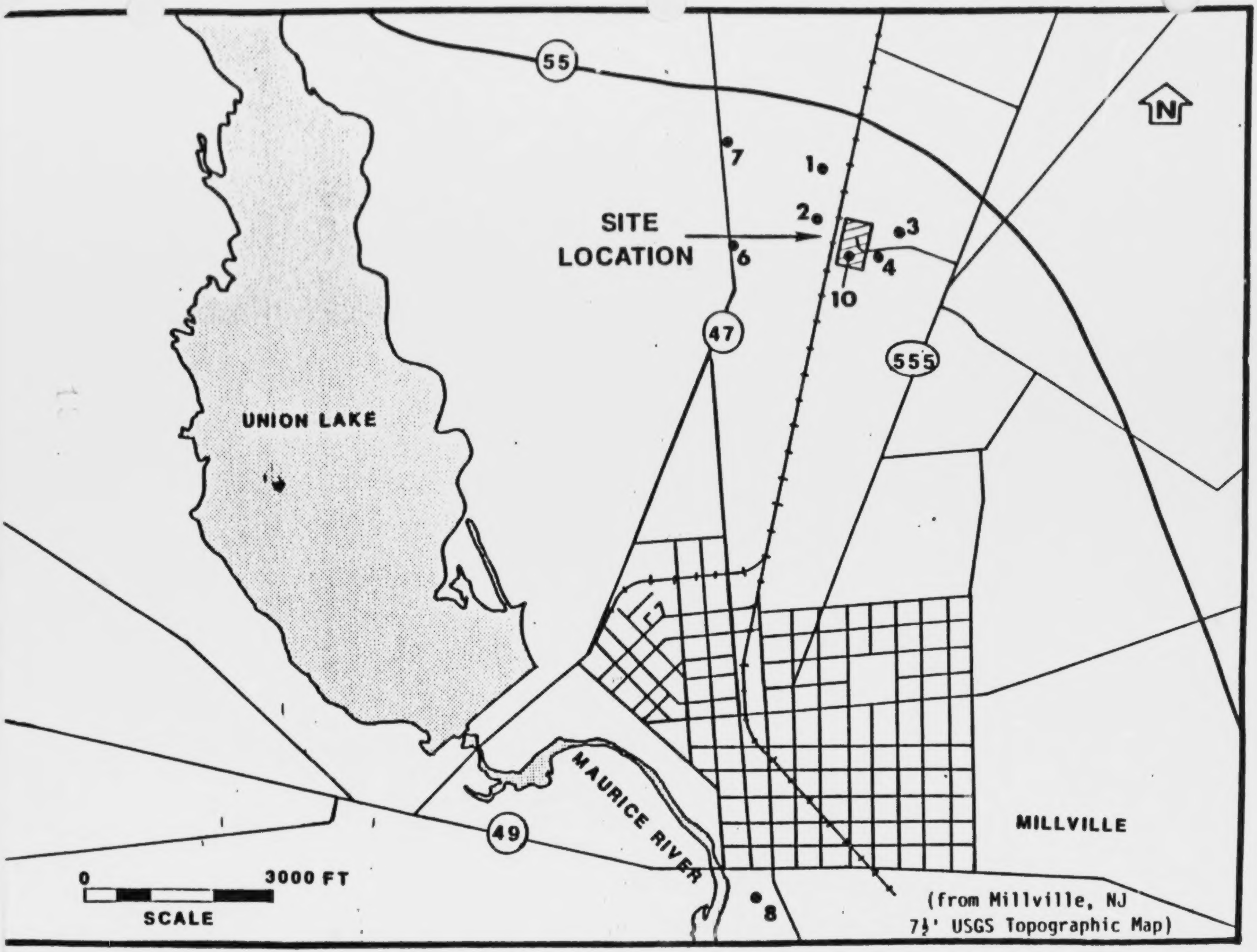
N
ROUTE 55
WHEATON AVE.
BORIS AVE.
POWER LINE
PETTICOAT STREAM
MW-13S
MW-9S
TP-2
MW-12S
MW-9D
TP-12
MW-9S
TP-13
TP-15
TP-14
MW-4D
MW-4S
MW-14S
TP-3
TP-3A
MW-10S
TP-11
TP-4
MW-
TP-7
TP-6
TP-5
NASCOLITE PLANT
MW-2
MW-11S
MW-3
MW-5
MW-15D
MW-15S
NASCOLITE OFFICE
MW-16S
TP-10
TP-9
APPROXIMATE LIMIT OF CONTAMINATED GROUNDWATER
MW-7D
MW-7S
TP-8
MW-6S
APARTMENT COMPLEX
MW-17D
MW-17S
0 SCALE 300 F
LEGEND
• MONITORING WELLS (1981)
⊗ MONITORING WELLS (FEBRUARY 1983)
● MONITORING WELLS (OCTOBER 1983)
▲ TEST PITS
—·—·— NASCOLITE PROPERTY LINE
NORTH PLANT AREA
▤ HOT SPOT AREAS
TRC Environmental Consultants, Inc
NJDEP
TRENTON

FIGURE 5
GENERAL AREAL EXTENT
OF CONTAMINATION
NASCOLITE SITE, MILLVILLE, N.

Methyl methacrylate (MMA), a major contaminant at this site, was found in the groundwater extracted from two of the monitoring wells, MW-12S and MW-8S, at concentrations of 400 and 7400 ppm, respectively. The groundwater from these two monitoring wells also contained bis(2-ethylhexyl) phthalate and di-n-butyl phthalate as well as higher concentrations of several volatile organic compounds including benzene, toluene, ethylbenzene and trichloroethylene (TCE). These and several other monitoring well samples had an MMA odor. However, no MMA was detected in any other monitoring well. Samples from MW-5S and MW-10S contained bis (2-ethylhexyl) phthalate. The MW-11S sample was contaminated with several volatile organic compounds, including ethylbenzene, benzene, toluene and 1,1,1-trichloroethane and at lower levels with bis(2-ethylhexyl) phthalate and di-n-butyl phthalate. The samples from MW-7D, which is downgradient of MW-11S, contained bis(2-ethylhexyl) phthalate, vinyl chloride, 1,2-dichloroethane, ethylbenzene, and benzene. Samples from MW-4S and MW-4D, MW-17S and MW-17D, MW-15S and MW-15D, MW-9S and MW-9D as well as MW-16S, MW-6S, MW-13S and MW-14S contained no detectable organic compounds except methylene chloride (a common laboratory contaminant) and only a few metals.

The sample from MW-8S was the only groundwater sample tested for gross alpha and gross beta radiation during the early 1985 investigations. The gross alpha level was 43 picocuries/liter (pCi/l), which is nearly three items the federal and state Primary Drinking Water Standard of 15 pCi/l. It was uncertain whether the gross alpha level measured was due to radioactive contamination of residue materials or to naturally occurring radioactive levels. Additional groundwater sampling and analysis of eight monitoring wells, including MW-8S, in June 1987 showed the level of alpha radiation to be below the detection limits.

Seven off-site and one on-site drinking water wells were sampled as part of the Nascolite field investigation. These well locations are shown on Figure 6. The nearest downgradient potable well that can be potentially impacted by contamination from Nascolite is Millville's municipal supply well (WP-8). This well was sampled during the investigation and is approximately two miles from the site. The results of a sample obtained from this well indicated no contamination. None of the off-site potable wells contained any detectable organic chemicals except methylene chloride, which is a common laboratory contaminant. All but one well contained metal concentrations within the federal drinking water standards. The lead concentrations in the two samples collected from the well WP-6 were 0.074 and 0.068 ppm. The federal and state drinking water standard for lead is 0.050 ppm. There is one on-site potable well, WP-10, that supplies water to the old Nascolite office building. A sample from that well was contaminated with several volatile organic compounds including benzene, ethylbenzene, toluene, trichloroethylene and MMA. The Cumberland County Health Department has notified the owners of wells WP-6 and WP-10 not to use the wells for potable purposes. The contamination found in well WP-6 cannot be attributed to Nascolite, since it is one mile upgradient of the site.


N
55
7
1
SITE LOCATION
2
3
6
4
10
47
555
UNION LAKE
MAURICE RIVER
49
MILLVILLE
0
3000 FT
SCALE
8

(from Millville, NJ
7½' USGS Topographic Map)

Four samples of waste material were taken during the remedial investigation in early 1985 for determining the chemical composition of the contamination source. Waste material sample WM-1 was a fine to coarse grained sand, saturated with a dark red viscous material collected from a depth of eight feet from test pit TP-3 (see Figure 3). TP-3 was located at the area from where the tanks were excavated. It contained 252,000 parts per million (ppm) MMA and 2,210 ppm bis(2-ethylhexyl) phthalate. Samples WM-2 and WM-3 were collected from tanks which had been excavated from the site. Sample WM-2 was an oily viscous sludge and was found to contain several organic compounds including 22 ppm toluene, 113 ppm ethylbenzene and 75,798 ppm bis(2-ethylhexyl) phthalate. Sample WM-3 was analyzed and found to contain compounds including 45 ppm ethylbenzene, 328 ppm toluene and 6,446 ppm bis(2-ethylhexyl) phthalate. All three of these samples contained high lead concentrations. The last waste material sample, WM-8A, was collected from monitoring well 8S as it was evacuated prior to collecting the groundwater sample. This dark, cherry-red, fluid, which was pumped from the top of the water table, contained 475,300 ppm MMA, 53,000 ppm bis(2-ethylhexyl) phthalate and 3,650 ppm di-n-butyl phthalate. Metals in this sample were at very low levels in comparison to the other waste samples. This fluid was also present in MW-12.

Results of the sampling conducted in June 1987 found that the floating product was no longer present in MW-8S. However, product was found in the bottom of MW-12S. This material was more viscous than the sample obtained in early 1985 and again in early 1986. Borings drilled in June 1987 in the North Plant area to depths between 12 and 25 feet did not locate floating product. Since the product was not collected by pumping the aquifer, not found in borings drilled in the area, and only found in the bottom of the well in June 1987, it has been concluded that the product is no longer at the location where it was observed as recent as early 1986.

Four surface soil samples were collected from zero to 6 inches in depth. The sampling locations are shown on Figure 4. Samples SS1, SS2, and SS3 were taken from the ditch between the plant and the railroad tracks. This ditch apparently received both surface run-off and waste water discharge. Sample SS6 was collected along a trench which at one time held a pipe which conveyed process cooling water into the pool at the home of the site owner. All surface soil samples contained high metal concentrations, primarily in samples SS1, SS2 and SS3. The ditch samples all contained lead concentrations greater than 14,000 ppm. Some organic compounds were also detected in the surface soils. In November 1987, EPA tested the soils and found 41,800 ppm lead in surface soils adjacent to the loading dock.

Five air samples were collected and analyzed for volatile organic compounds including MMA. All of the priority pollutant volatile compounds were below the detection limit, and only two samples, AIR5 and AIR7, showed any detectable concentration of MMA. Sample AIR5 was collected while soil borings B-10S, B-5S and B-11S were being drilled. The MMA concentration was 0.03 ppm. Sample AIR7 was collected by a sampling device worn by one of the field personnel for an hour while excavating test pits TP-14 and TP-15. The MMA concentration was 4.95 ppm. The levels measured are well below the Occupational Safety and Health Administration (OSHA) permissible limit of 100 ppm averaged over an 8-hour work shift. The predominant source of the air emissions has been removed by the EPA removal action.

The Remedial Investigation (RI) activities have determined that the geology below the Nascolite site consists of fine to coarse grained sands, containing a small percentage of silt, which has interfingered layers of sandy to silty clay layers within it. The hydraulic gradient has been determined to have a substantial vertically downward gradient as well as horizontal flow components. This would mean that the clay layers are probably discontinuous, and that Nascolite may be situated within a groundwater recharge zone. Analyses of the monitoring and drinking water wells on site indicate that the groundwater and soils are contaminated with volatile organics, base/neutral compounds, MMA, and heavy metals. These chemicals are migrating in a southerly direction through the groundwater, and are found in the Nascolite site soils. Through dermal contact with the soils, and through ingestion of the groundwater, the contaminants at the site pose risk to the public health.

Public health concerns at Nascolite in its current condition are summarized below:

-The groundwater underlying the site is contaminated, and there is a potential for the contamination to migrate to downgradient potable wells. The nearest downgradient potable well is Millville's municipal supply well, which is approximately two miles from the site. However, residences along Doris Avenue rely on individual wells for their source of potable water. These homes were not directly downgradient but the residents had shown strong concern about their wells possibly being contaminated by the pollutants found at the Nascolite site. Contaminated ground water is an exposure pathway through ingestion.

-The air investigation found air emissions from Nascolite at levels that do not pose a health threat. Although the concentrations of MMA measured are below the OSHA permissible limit, the emissions are sufficient to create a nuisance odor problem. Air emissions are an exposure pathway through inhalation.

-Hazardous substances were found in the surface soils and provide an exposure pathway through dermal contact. The soils are now covered with a tarp, but this is not a permanent remedy.

In April 1987, NJDEP formally requested that EPA conduct a removal action at the site. The action began on November 2, 1987, and was completed on November 27, 1987. The removal actions taken included fencing in the manufacturing area of the site, installation of tarps to the lead contaminated soils, cleaning and dismantling the tanks, removing the majority of the asbestos, removing the liquid wastes, and securing all unsecured wells. The remaining asbestos pipe installation has been covered with a tarp to avoid it's exposure to the ambient air.

ENFORCEMENT

The initial Potential Responsible Party (PRP) search has been conducted with the result being that the owner of Nascolite, Ms. Lucretia Villano, is currently the only known PRP. NJDEP offered Ms. Villano the opportunity to undertake the RI/FS activities, but she declined. EPA will offer Ms. Villano the opportunity to finance or conduct future work. At present, a more extensive PRP search is being conducted. If additional parties are identified, EPA will initiate appropriate enforcement action.

COMMUNITY RELATIONS HISTORY

A public meeting was held on August 18, 1986 to present the results of the Remedial Investigation/Feasibility Study (RI/FS) and EPA's preferred remedy. Information related to the Nascolite RI/FS activities was distributed to the public on August 8th, and the comment period extended from then until August 29th. The preferred remedy at this time was to excavate and landfill the contaminated soils. Subsequent to this, the Superfund Amendments and Reauthorization Act of 1986 (SARA) was passed, which preferred more permanant alternatives, forcing the reevaluation of the alternatives.

A second public meeting was held on March 7, 1988 to present the new preferred alternative and to explain the delay since the last public meeting. The public comment period ended on March 25, 1988. At the public meeting, major concerns were raised by adjacent homeowners regarding the quality of their potable well water. As a result of their concerns, EPA has recommended that the existing water line along Wheaton Avenue be extended to include the residences of Doris Avenue. Responses to all public comments, from the August 1986 and the March 1988 public comment periods, are included in the Responsiveness Summary, which can be found in Attachment 1 of this document.

SCREENING OF REMEDIAL TECHNOLOGIES AND ALTERNATIVES

The feasibility study process involves, as a first step, selecting technologies that are appropriate for remedying the public health and environmental concerns associated with a particular site.

In the case of the Nascolite site, the remedial objectives are to control the waste disposal areas and to manage contamination migration. The remedial measures evaluated were designed to alleviate the potential public health risks and environmental impacts associated with the waste materials and contaminated soils and groundwater present at the Nascolite site.

The alternatives that will be presented in this document are those that passed the initial screening in the Evaluation of Alternative section of the Feasibility Study report. Several treatment technologies for groundwater remediation remained after the initial screening. However, this was not the case for treatment technologies for the soil and waste. Incineration was the only permanent remedy that remained after the initial screening.

Two other treatment methods for the soil and waste material were examined in some detail before being eliminated. These were polymerization of the floating product and in-situ biodegradation of the contaminated soil and floating product. Also, with the changing site conditions, alternatives regarding the "floating product" are no longer appropriate.

In in-situ biodegradation, liquid waste materials and adsorbed soil contaminants are degraded by microrganisms present in the ground. Naturally occurring bacteria and other organisms are stimulated by the addition of nutrients and oxygen to break down the contaminants into non-toxic constituents. Given the right conditions, the process produces no toxic residuals or by-products, and all biological decay takes place in the ground at the contaminant source. In-situ biodegradation has not been demonstrated as effective for complex combinations of contaminants such as those at Nascolite. Furthermore, several of the contaminants present at Nascolite are nondegradable by biologic means, such as the ethylbenzene, tetrachloroethylene and poly MMA. The heavy metals present in the soils and waste at Nascolite would inhibit biological degradation. It is doubtful whether the microbial population present or a microbial population cultured and injected could effectively degrade all of the contaminants in the soils at the Nascolite site. For this reason, in-situ biodegradation was eliminated from further consideration.

The remedial alternatives that remained after the initial screening were divided into source control alternatives and groundwater remediation alternatives. Further evaluation of these alternatives are discussed on the next section.

Source Control Alternatives

The remaining source control alternatives after the initial screening include the following:

- Soil and Waste Excavation and Disposal via Landfilling
- Soil and Waste Excavation and Incineration
- Site Grading and Capping

A factor to be considered in evaluating excavation is that odors resulting from excavation activity are expected to be significant. This is expected because MMA odors were detected by residents more than a half mile from the site after relatively small soil disturances during the remedial investigation. The use of foams as a vapor suppressant were evaluated by NJDEP, and were found to be 60% effective against MMA. Fugitive emissions during excavation would still be significant. There were concerns that there would be a substantial hazard in extracting the floating product and contaminated soils in that pure MMA has a flash point of 70°F. Therefore, caution must be exercised when addressing the soil contaminants.

Several options for disposal of the excavated material were evaluated for implementation in the case that excavation was determined to be feasible. These options are offsite and on-site landfills and treatment by off-site and on-site incineration.

Land disposal is not a permanent method of remediation since the waste is not treated, and therefore, does not conform to the requirements of SARA, which mandates that wastes be treated to the maximum extent practicable. With landfilling, there is always a potential for leakage and subsequent contaminant migration. The volatile organic chemicals present in the waste materials from Nascolite are the most soluble in water and thus are the most likely to leach or migrate. Therefore, this method of remediation does not consider the overall protection of human health and the environment.

Treatment of contaminated soils by incineration will remove the mobile volatile compounds and the other organics by thermal destruction. The incinerated soils (ash) are expected to be more stable and inert with a significantly lower potential for contaminant migration from the final disposal locations. On-site incineration is more cost-effective than off-site incineration. An important drawback to the use of on- or off-site incineration for this site is that some of the soils here have a high metals content, and incineration would not lower the metal's toxicity. As a result, the soils are unsuitable for incineration.

Treatment of the contaminated waste material is preferred rather than disposal in an on-site or off-site landfill. Although incineration may be an appropriate technology for removing the organic compounds in the Nascolite soils, the potential odor problems associated with excavation make it evident that an effective in-situ treatment method is more desirable. In addition, the low flash point of MMA makes the safety associated with excavation questionable. Since incineration was the only alternative evaluated, a supplemental Feasibility Study will be performed to further evaluate other in-situ treatment technologies.

Groundwater Remediation Alternatives

Each of the remaining groundwater remediation alternatives after the initial screening process include removal via a groundwater extraction system. Treatment of the extracted groundwater can be performed via these options;

- Granular Activated Carbon Adsoption

- Resin Adsorption

- Air Stripping

- Steam Stripping

All of the options are effective in treating the contaminants found in the groundwater plume underlying the Nascolite site. Therefore, all four treatment alternatives above remain for consideration.

Following treatment, effluent disposal must be addressed. Two options considered were as follows.

- Discharge to the Millville Sewage Treatment Plant

- Discharge to recharge wells or basins

Summary of Remedial Alternatives

CERCLA, as amended by SARA, requires each selected site remedy to be protective of human health and the environment, cost effective, and in accordance with statutory requirements. Permanent solutions to toxic waste contamination problems are to be achieved wherever possible, while treating wastes on-site and applying alternative or innovative technologies. Numerous remedial alternatives were evaluated during the feasibility study. However, after completion of the Feasibility Study, it was determined that the soil studies were incomplete and not appropriate. The scope of this ROD is to address only a groundwater operable unit at this time.

The following remedial alternatives were all the ones evaluated during the Feasibility Study for the treatment of groundwater contamination;

Alternative A - Site grading and capping, and groundwater extraction with on-site treatment and reinjection of treated effluent.

This alternative includes the installation of extraction wells which will be used to pump the contaminated groundwater. Also, extraction wells would be installed along the southern boundary of the site to form a hydraulic barrier pumping system. The extracted groundwater would be treated on-site and reinjected into the aquifer. Operation of the system would continue until the aquifer cleanup standards are achieved. Another portion of the remedy would include the construction of a multi-layer cap, conforming with RCRA standards, over areas of soil contamination.

Advantages of implementing this alternative include the removal of the major source of contamination, the control and treatment of contaminated groundwater, and the minimization of exposure risks due to the volatilization of residual contaminants. The disadvantages involve the presence of residual soil contamination and the long-term maintenance requirements of the cap. There are potential odor problems associated with groundwater treatment.

Alternative A-1 - This alternative involves site grading and capping, groundwater extraction with discharge to the Millville sewage treatment plant (STP).

The remedial measures outlined above are similar to those of Alternative A with the exception that the extracted groundwater would not be treated on-site. In this alternative, the contaminated groundwater would be transferred to the Millville STP for treatment. Construction of approximately 4,000 feet of force main and a pump station would be required for implementation. Treatability studies would also be necessary to determine the impact, if any, on the operation of the Millville STP.

The advantages and disadvantages of this approach would be identical to those of Alternative A with the exception of those related to groundwater treatment. The Millville STP generally would be more reliable than an on-site treatment unit, since the STP is a large, well operated system used to continuously treat city sewage. The flow of contaminated groundwater through the Millville sewers potentially could produce nuisance odor problems.

Alternative B - Groundwater extraction with on-site treatment and reinjection of treated effluent.

This alternative includes groundwater extraction and on-site treatment and reinjection. It is identical to Alternative A except that the site will not be graded and capped. It would effectively control and treat the contaminated groundwater underlying the site. The major disadvantages of this alternative are that soil contamination remains, and that additional monitoring of the soil would be required to evaluate any contaminant migration.

Alternative B-1 - Groundwater extraction with discharge to the Millville STP.

This alternative includes extraction of the contaminant plume and discharge to the Millville STP. This alternative is similar to Alternative B except that the extracted contaminated groundwater would be transferred off-site for treatment.

Alternative C - Complete waste/soil excavation with off-site disposal and groundwater extraction with on-site treatment and reinjection.

This alternative would include excavating the contaminated waste and soils and transporting the material off-site for disposal at a RCRA-permitted landfill. Also, all tanks, drums and buildings within the excavation area would be transported off-site for disposal at a RCRA facility. Sheet piling would be installed along the railroad tracks adjacent to the excavation area to avoid any disruption of railroad operations. One major problem in implementing this alternative would the control of air emissions and odors.

Alternative C-1 - Complete waste and soil excavation with off-site disposal and groundwater extraction with discharge to the Millville STP.

This alternative is similar to Alternative C except that the extracted groundwater would be conveyed to the Millville STP for treatment.

Alternative D - No Action

The National Contingency Plan requires that the "No Action" alternative be evaluated. As part of a no action alternative, the following activities would be included:

- groundwater monitoring;

- monitoring of surface water runoff at the ditch leaving the site;

- limitations on the use of groundwater in the site vicinity; and

- a deed restriction on future use of the property.

The no action alternative has been developed to provide a baseline on what threats would be posed by the site contamination if no remedial action is taken. A groundwater and surface runoff monitoring program would be developed. Also, a deed restriction would limit future use of the property.

Although any direct contact with the hazardous substances would be reduced by the fence installed by EPA to limit access to the site, the overall protection of public health and the environment would not be addressed. The toxicity, mobility and volume of the contamination would not be reduced. The source of the groundwater contamination would remain and continue to pollute the underlying groundwater. The contaminant plume would migrate through the aquifer and ultimately contaminate downgradient public and private potable wells, causing human health hazards through direct contact and ingestion.

EVALUATION OF ALTERNATIVES

Alternatives A and A-1 include as a component site grading and capping in order to remediate soil contamination. Site grading and capping is an effective method for reduction or elimination of surface water infiltration, thereby, minimizing or eliminating associated leachate production and resulting contaminant migration. Capping at Nascolite would involve the placement of separate caps over each major area of soil contamination: the North Plant area, the laboratory area east of the plant and the south plant area. Contaminated surface soils in the ditch west of the plant would be removed and placed under one of the proposed caps. Each cap would be designed and constructed in accordance with RCRA requirements and extend approximately 25 feet beyond the estimated limits of the soil contamination. Due to the flat topography of the site, the surface of the site would be graded to promote surface water run-off away from the contaminated areas and eliminate infiltration.

These alternatives would be effective in minimizing leachate production from contact between water and contaminated soils and wastes above the groundwater table. The contaminated material would remain in place and would not be treated or destroyed. A small amount of leachate is expected due to the fluctuating water table contacting the contaminated zone. "The site capping" is not considered a permanent remedy since the volume, toxicity, and mobility of the waste is not significantly reduced.

All of the alternatives with the exception of "No Action" include groundwater extraction and treatment as a component as well as discharge of the treated effluent.

Extraction of contaminated groundwater is necessary, regardless of the treatment technology utilized. There is no available technology which would effectively treat the groundwater in place. Removing the contaminated groundwater would effectively protect the private and public potable water wells from the migrating contaminant plume. Groundwater would be pumped until testing demonstrates that contaminant concentrations are below the established cleanup criteria.

Treatment of extracted groundwater can be accomplished by several methods. Alternative methods evaluated include air stripping, steam stripping, granular activated carbon adsorption (GAC), and resin adsorption. All alternatives would be designed to meet the Applicable or Relevant and Appropriate Requirements (ARAR's) set by the Federal and State governments for the quality of the treated groundwater.

All methods show a short-term effectiveness in remediation of the groundwater. Air stripping and steam stripping are proven technologies in removal of volatile organics, but there is a question in the removal of other contaminants using these methods . GAC has been shown to be effective in treating most organics and some metals. Resin adsorption is a relatively new technology and there is no available resin to treat all of the contaminants.

With the mechanism of both strippers transferring the contaminants from the water to the air, the long-term effectiveness and permanance is not addressed. Transferring media does not permanently remediate a contaminant. Resin adsorption and GAC collect the contaminants, thereby allowing a more permanent method of handling waste.

Resin adsorption and GAC, in this light, reduce the mobility and volume of the groundwater contamination. Air and steam stripping of the groundwater actually increases both the mobility and volume of the contamination. All four methods do not reduce the toxicity of the contamination.

The overall protection of human health and the environment is managed by reduction of the volume and mobility of the contamination. The concentrated contaminants can be disposed of, thereby providing this protection. Stripping provided a different pathway for the contamination to reach humans and the environment.

GAC and stripping are proven to be known technologies which have been utilized at other sites. These systems are simple and reliable in operation, and cost-effective. Resin adsorption is a relatively new technology, as mentioned before. No known resin is commercially available that could treat all of the contaminants in the Nascolite groundwater, and developing a new resin would be cost-prohibitive. There has been no data on it's implementability, which is expected to be low due to the complex engineering involved in it's design.

Community acceptance of air and steam stripping is expected to be low. With the low odor threshold of the MMA, complaints of the smell would be imminent. Due to the flash point of the MMA, a tent structure to collect gases would not be feasible. Support agencies would probably not concur with stripping due to the expulsion of the contamination into the air. GAC and resin adsorption are both closed systems which would not allow the MMA to be exposed to the air.

Two methodologies were evaluated for the disposal of the treated groundwater. These methods included discharge to the Millville sewage treatment plant (STP) and recharge to on-site wells or basins.

The Millville STP alternative would provide short and long term effectiveness, reduction in mobility and volume of the contamination, and would protect human health and the environment. The Millville City Council has informed EPA that they are concerned about the STP's ability to meet newly imposed treatment criteria, which would disqualify the plant as a treatment method. At the public meetings, and through citizen's correspondence, it was obvious that public concern was high regarding use of their STP. Concern was also raised on the nuisence odor that would be produced by discharging into a sewer.

The final alternative for disposal of the treated groundwater is the recharge of the treated effuent by recharge basins or injection wells. With the public concern about odor, recharge basins are ruled out. The reinjection wells can be placed as to provide hydrostatic control on the aquifer, immediately upgradient of the contaminant plume, effectively controlling further migration of contamination. Reinjection is less expensive and is acceptable by local and state agencies. Reinjection may also accelerate the completion of the Remedial Action by flushing the soils.

NO ACTION ALTERNATIVE

Finally, the no action alternative for the Nascolite site presented in the Feasibility Study (FS) report consists of the following: fencing the contaminated areas; monitoring groundwater and limiting groundwater use in the vicinity; and placing a deed restriction on future use of the area. This alternative would not contain, treat or destroy the contaminated materials associated with the site. The source of groundwater contamination would remain, as well as the potential for continued degradation of groundwater downgradient of the site. Therefore, potable wells may become contaminated, so there is a potential for direct contact and ingestion. Fencing the site, as part of the EPA removal action, has reduced the health risks associated with direct contact exposure to surface contamination on-site.

SELECTED REMEDY

Based on the results of the RI/FS and after careful consideration of all reasonable alternatives, EPA and the NJDEP presented Alternative B as the preferred choice for addressing the Nascolite site at the public meeting held on March 7, 1988. The input recieved at the public indicated a potential need to extend a water line in the area of Doris Avenue to those residences who currently rely upon individual wells for their drinking water.

As a result of the concerns raised at the public meeting and the fact that the contaminant plume could impact their wells, EPA has added to the selected remedy the water line extention to connect six residences Alternative B, as described at the public meeting, involves extracting the contaminated groundwater plume by using recovery wells. The exact location and number of recovery wells, the duration of pumping, and the distribution of pumping rates for the recovery wells, would be determined during the design of the remedy.

In addition, during the design of the remedy, bench scale and pilot testing of the treatment processes (i.e., air stripping and carbon adsorption) would be conducted to develop sizing and operating characteristics of the full scale treatment facility. Treatment can be accomplished by several methods including air stripping, steam stripping, carbon adsorption, and resin adsorption. The treatability testing will ensure that the remedy is effective in cleaning up the groundwater contamination.

Current EPA policy emphasizes on-site remediation wherever possible. In addition, upcoming land disposal restrictions will require waste to be treated prior to disposal at an off-site facility. Further, there is some concern that odors resulting from the excavation of the contaminated materials could not be adequately controlled. For these reasons, a remedy addressing soil contamination cannot be selected at this time. Additional studies are needed to identify and evaluate technologies which could effectively remediate the contaminated soils. A supplemental feasibility study emphasizing in-situ treatment methods will be initiated in the near future.

EPA believes that the selected alternative reduces the threat to public health and the environment by removing hazardous substances from the groundwater, thereby eliminating the exposure pathway involving direct contact of downgradient receptors to the contaminant plume. Further treatment of the off-gases resulting from air stripping, if deemed necessary, would eliminate the exposure pathway associated with inhalation of vapor phase contaminants.

Both air stripping and granular activated carbon treatment are very effective and highly efficient technologies for the removal of contaminants from groundwater. These technologies would be implemented until site cleanup objectives are attained.

The possibility that the formerly floating product may be encountered in subsequent activities is acknowledged. If it is encountered, the substance will be extracted and treated off-site by incineration or polymerization.

Performance Goals

Alternative B, as previously described, is a groundwater remediation measure. The addition of a water line extension for those residences of Doris Avenue will provide a safe source of drinking water to potentially impacted citizens.

The groundwater remediation will include extraction of the contaminant plume, treatment, and on-site reinjection of the effluent. The system will be operated until the aquifer is restored to drinking water quality. This groundwater remediation alternative will eliminate the migration of the contaminant plume.

Specific target concentrations for groundwater remediation were developed using applicable or relevant and appropriate requirements (ARARs) identified for the groundwater at Nascolite. The Clean Water Act, the Safe Drinking Water Act, the Solid Waste Disposal Act, the New Jersey Safe Drinking Water Act, and the Ground Water Quality Criteria of the New Jersey Administrative Code (NJAC) 7:9-6 were used to develop the cleanup goals.

The intent of the operation of the groundwater extraction and treatment system is to continue until the federal drinking water and NJDEP proposed A-280 drinking water standards are achieved. Should carcinogenic compounds be present for which individual standards do not exist, a 10^{-6} cancer risk cleanup standard will be used as a cleanup goal. In addition, for any other contaminants not covered by the cleanup standards above a goal of 5 ppb will be used for each individual contaminant and a goal of 50 ppb of total noncarcinogenic and non-A-280 compounds. These goals will be pursued to the maximum extent feasible.

It is necessary that samples in the wetland be taken to evaluate any damages to that natural resource. Sampling will be conducted in the buildings to determine the extent of contamination and if any remediation is necessary. A cultural resources assessment must be completed at the site before any remedial action is taken. A monitoring program will also be conducted during Remedial Design.

TABLE 1
CAPITAL COSTS, OPERATION AND MAINTENANCE COSTS, AND PRESENT WORTH COSTS

Alternative	Capital Cost ($)	Annual Operation & Maintenance ($)	Present Worth ($)
No Action	48,000	20,000	237,000
SOIL AND WASTE CONTAMINATION			
Excavation with Disposal at:			
Off-Site Landfill	6,893,000	20,000	7,082,000
On-Site Landfill	1,224,000	21,000	1,422,000
On-Site Incinerator	13,945,000	20,000	14,133,000
Off-Site Incinerator	21,466,000	20,000	21,655,000
Site Grading and Capping	571,000	21,000	769,000
Extraction (via pumping) and Disposal of Floating Product Through:			
On-Site Incineration	1,135,000	30,000	1,362,000
Off-Site Incineration	1,266,000	20,000	1,455,000
GROUND WATER CONTAMINATION			
Complete On-Site Treatment and Effluent Discharge:			
Treatment			
GAC Adsorption	541,000	236,000	2,056,000
Resin Adsorption	1,402,000	198,000	2,683,000
Air Stripping	368,000	126,000	1,207,000
Steam Stripping	467,000	300,000	2,375,000
On-Site Reinjection Discharge			
Recharge Wells	102,000	--	102,000
Recharge Basins	223,000	--	223,000
On-Site Pretreatment With Effluent Discharge to Millville STP:			

Alternative	Capital Cost ($)	Annual Operation & Maintenance ($)	Present Worth ($)
With Flow Equalization Only	678,000	120,000	1,480,000
Discharge After Pretreatment*	893,000	176,000	2,039,000
Installation of Water Line	50,000		

TABLE 2
ESTIMATED CAPITAL COSTS, OPERATION AND MAINTENANCE COSTS, AND PRESENT WORTH COSTS FOR COMPREHENSIVE REMEDIAL ALTERNATIVES

Alternatives	Capital Cost ($)	Annual Operation & Maintenance ($)	Present Worth ($)
A (site grading and capping; pump and treat groundwater w/ reinjection)	1080	287	2900
A-1 (site gading and capping; pump groundwater and transfer to STP)	1277	171	2456
B (pump and treat groundwater w/ reinjection)	509	266	2111
B-1 (pump groundwater and transfer to STP)	696	150	1530
C (complete soil/waste excavation; off-site disposal; pump and treat groundwater w/reinjection)	7536	256	8986

Alternative	Capital Cost ($)	Annual Operation & Maintenance ($)	Present Worth ($)
C-1 (complete soil/waste excavation; off-site disposal; pump groundwater and transfer	7813	140	8562
D (No Action)	48	20	189
Installation of Water Line (estimated)	100	---	---

- All costs are in thousands of dollars
- It is assumed that groundwater treatment will be with carbon adsorption

ATTACHMENT 1

EPA CONTRACT NO. 68-01-7250

EBASCO SERVICES INCORPORATED

RESPONSIVENESS SUMMARY
FOR THE
NASCOLITE CORPORATION SITE
CUMBERLAND COUNTY, NEW JERSEY

MARCH 1988

NOTICE

The preparation of this document has been funded by the United States Environmental Protection Agency (U.S. EPA) under REM III Contract No. 68-01-7250 to Ebasco Services, Inc. (Ebasco).

EBASCO SERVICES INCORPORATED EBASCO

160 Chubb Avenue Lyndhurst N J 07071 (201) 460-1900

March 25, 1988

Ms. Lillian Johnson
Community Relations Coordinator
U.S. Environmental Protection Agency
Region II
26 Federal Plaza
New York, NY 10278

Subject: Responsiveness Summary
Nascolite Corporation Site
Cumberland County, New Jersey
EPA Contract No. 68-01-7250

Dear Ms. Johnson:

Ebasco Services Incorporated (Ebasco) is pleased to submit this Responsiveness Summary for the Nascolite Corporation site. If you have any questions, please call me at (201) 460-6434 or Pamela Binder at (201) 906-2400.

Very truly yours,

Sheila Conway for Dev Sac

Dev R. Sachdev
REM III Region II Manager

cc: M. Shaheer Alvi
M. K. Yates
R. T. Fellman
C. Andress
S. Conway

REM III PROGRAM

REMEDIAL PLANNING ACTIVITIES AT SELECTED UNCONTROLLED HAZARDOUS SUBSTANCE DISPOSAL SITES WITHIN EPA REGIONS I-IV

EPA CONTRACT NUMBER: 68-01-7250

RESPONSIVENESS SUMMARY
NASCOLITE CORPORATION SITE

MARCH 1988

Prepared by:

Pamela J. Binder 3/25/88

Pamela Binder
REM III Community
Relations Specialist
ICF Technology

Date

Approved:

Sheila Conway 3/25/88 Sheila Conway for Dev Sachdev 3/25/8

Sheila Conway
REM III Site Manager
ICF Technology

Date

Dev R. Sachdev, Ph.D., P.E.
REM III Region II
Manager
Ebasco Services, Inc.

Date

ACKNOWLEDGEMENT OF RECEIPT

Please acknowledge receipt of this enclosure on the duplicate copy of this letter and return the signed duplicate letter to: Dr. Dev Sachdev, Ebasco Services Incorporated, 160 Chubb Avenue, Lyndhurst, New Jersey 07071.

____ ________
Ms. Lillian Johnson Date

The purpose of this responsiveness summary is to provide the U.S. Environmental Protection Agency (EPA) and the public with a summary of citizen comments and concerns about the Nascolite Corporation site, Cumberland County, New Jersey, and the New Jersey Department of Environmental Protection (NJDEP) and EPA responses to those concerns. This responsiveness summary includes comments and responses from two public comment periods. The first public comment period was conducted by NJDEP after completion of the Remedial Investigation and Feasibility Study (RI/FS) in 1986. No alternative was selected at that time. EPA reevaluated information gathered during the RI/FS and a second public comment period was held in March 1988 to present the alternatives and selected remedy. A summary of the comments received during the March 1988 public comment period is provided in this responsiveness summary. Comments and responses received by NJDEP during the August 1986 public comment period are referenced in Appendix A. All comments and concerns summarized in this document have been factored into EPA's final decision regarding the selection of an alternative for groundwater remediation at the Nascolite Corporation site. EPA plans to initiate a supplemental FS emphasizing in-situ treatment methods for soil remediation at the Nascolite Corporation site in the near future.

This community relations responsiveness summary for the Nascolite Corporation site is divided into the following sections:

I. **Responsiveness Summary Overview** This section briefly outlines the proposed remedial alternatives that were evaluated as part of the Feasibility Study (FS), including EPA's preferred alternative.

II. **Background on Community Involvement and Concerns** This section provides a brief history of community interest in the Nascolite Corporation site and a chronology of community relations activities conducted by NJDEP and EPA during remedial response activities for the Nascolite Corporation site to date.

III. **Summary of Major Questions and Comments Received During the Public Comment Period and NJDEP and EPA Responses To Comments.** This section summarizes major questions and comments made verbally and in writing to EPA and NJDEP during the 1988 public comment period and provides EPA and NJDEP responses to these comments.

IV. **Remaining Concerns** This section discusses community concerns about the alternatives for soil remediation at the Nascolite Corporation site that are to be addressed during a supplemental Feasibility Study (FS) that EPA is planning for the Nascolite Corporation site.

Appendix A NJDEP Comments and Responses received subsequent to the initial release of the RI/FS for the Nascolite Corporation site in August 1986.

Appendix B EPA's Proposed Remedial Action Plan which was distributed to the public during March 1988 outlining the remedial alternatives evaluated to address groundwater contamination at the Nascolite site and EPA's preferred remedial alternative.

Appendix C	Letters and comments received during the public comment period conducted from February 26, 1988 to March 25, 1988.
Appendix D	Public Meeting Agenda from the March 7, 1988 meeting held in Millville, New Jersey.
Appendix E	Sign-in sheet from Public Meeting held on March 7, 1988 in Millville, New Jersey
Appendix F	Letters and comments received during the public comment period conducted by NJDEP in 1986.

I. Responsiveness Summary Overview.

The Nascolite Corporation site is located in Cumberland County, New Jersey. The Nascolite plant operated from 1953 to 1980. The facility manufactured poly methyl methacrylate (MMA) sheets, commonly known as acrylic or plexiglas, both scrap acrylic and liquid MMA monomer were used in the manufacturing process.

During 1981, the New Jersey Department of Environmental Protection (NJDEP) Division of Water Resources (DWR) began investigating the Nascolite site, and in September 1981, the state issued an Administrative Consent Order (ACO) to the Nascolite Corporation. Nascolite's response was considered inadequate. NJDEP entered into a cooperative agreement with EPA which made funds available under the Superfund program for site remediation. Groundwater samples taken from monitoring wells by NJDEP in February 1983 showed significant concentrations of volatile organic compounds. Site investigation activities conducted by NJDEP's contractor TRC Environmental Consultants, Inc. (TRC) began in late January 1985. During February 1985, TRC installed shallow and deep monitoring wells and tested the groundwater from the wells. During October 1985, additional shallow and deep monitoring wells were constructed. Soil samples from the borings were collected and laboratory analyses conducted. In addition, several test pits were excavated and logged. Two rounds of groundwater samples were collected and analyzed, the first during March 1985 and the second during December 1985.

The results of sampling and laboratory analyses of chemical waste materials, soils, groundwater and air indicate contamination exists on site. Chemical waste material in tanks and in the ground at the site has resulted in contamination of soil, sediments, and groundwater. The contaminants include methyl methacrylate, phthalates, organic solvents, base neutral compounds, metals, and phenols.

In July 1986, NJDEP's contractor completed an RI/FS to identify an alternat to clean up the Nascolite Corporation site. However, a remedial alternativ was not selected at that time. While additional studies were being performed, the NJDEP asked EPA to perform a removal action at the site. All surface material was recontainerized and most was removed off-site. The entire property was fenced and tarpaulins were spread over the most highly contaminated areas to prevent off-site migration of contaminated material.

In November 1987, EPA took the project lead and decided it was feasible to implement a groundwater extraction system, and start pumping and treating groundwater independent of additional studies concerning contaminated soils. EPA plans to initiate a supplemental FS emphasizing in-situ treatment methods for soil remediation in the near future.

During investigations for site remediation, seven potential remedial alternatives for groundwater cleanup were identified. These alternatives are summarized below:

Alternative A: Site Grading and Capping, Groundwater Extraction with On-site Treatment and Reinjection of Treated Effluent.

This alternative includes the installation of extraction wells which will be used to pump the contaminated groundwater. The extracted water would be treated on-site and reinjected into the aquifer. This alternative also includes the construction of a multilayer cap, conforming with Resource Conservation and Recovery Act (RCRA) standards, over the area of the soil contamination.

Alternative A-1: Site Grading and Capping, Groundwater Extraction with Discharge to the Millville Sewage Treatment Plant (STP).

This alternative is similar to Alternative A except that extracted groundwater would be treated at the Millville STP.

Alternative B: Groundwater Extraction with On-Site Treatment and Reinjection of Treated Effluent.

This alternative involves groundwater extraction and on-site treatment and reinjection. It is identical to Alternative A except that the site would not be graded and capped.

Alternative B-1: Groundwater Extraction with Discharge to the Millville STP.

This alternative involves the extraction the contaminant plume and discharge to the Millville STP. It is similar to Alternative B except the extracted contaminated water will be conveyed off-site for treatment.

Alternative C: Complete Waste/Soil Excavation with Off-Site Disposal and Groundwater Extraction with On-Site Treatment and Reinjection.

This alternative includes excavating the contaminated waste and soils and transporting the material off-site for disposal at an approved RCRA facility. All tanks, drums and buildings within the excavation area would also be transported off-site for disposal at a RCRA facility.

Alternative C-1: Complete Waste and Soil Excavation with Off-Site Disposal and Groundwater Extraction with Discharge to the Millville STP.

This alternative is similar to Alternative C except that extracted groundwater would be transported to the Millville STP for treatment.

Alternative D: No Action.

This alternative involves groundwater and surface runoff monitoring. In addition, a deed restriction would limit future use of the property.

Selection of an Alternative

EPA's selection of an alternative for groundwater remediation at the Nascolite site will be based on the requirements of the Superfund Law. Superfund Law requires that a selected site remedy be protective of human health and the environment, cost-effective, and in accordance with statutory requirements. Current EPA policy also emphasizes permanent solutions incorporating on-site remediation of hazardous waste contamination whenever possible. Final selection of a remedial alternative will be documented in the Record of Decision (ROD) only after consideration of all comments addressed in this responsiveness summary.

II Background on Community Involvement and Concerns

Community concern regarding the Nascolite Corporation site has been limited. The major concern expressed by residents is the continuation of a safe drinking water supply. Residents have inquired about the potential health effects associated with the site contamination. In addition, residents who live near the Nascolite site have identified a potential negative impact on property values as a result of housing a Superfund site in proximity to their homes.

Chronology of Community Relations Activities

During NJDEP's and EPA's remedial site activities, several site-specific community relations activities have taken place. In February 1985, NJDEP held a public meeting in Millville, New Jersey to discuss initiation of the RI/FS and receive questions and comments. In April 1985, NJDEP developed a community relations plan for the Nascolite site. On August 18, 1986 NJDEP held a public meeting in Millville, New Jersey to discuss completion of the RI/FS and to receive questions and comments. During March 1988, EPA distributed a press release and fact sheet outlining the Agency's preferred remedial alternative (PRAP) for site cleanup. On March 7, 1988 EPA briefed local officials and then held a public meeting to discuss the RI/FS and the preferred remedial alternative for groundwater cleanup. Since the beginning of the remedial investigation activities, there has been ongoing contact as well as periodic informal meetings between NJDEP, EPA, local officials and concerned citizens.

III. Summary of Major Questions and Concerns Raised During the Public Comment Period and NJDEP's and EPA's Responses to Comments.

This section addresses the March 1988 public comment period. However, a previous public meeting was held by NJDEP on August 18, 1986 at the Millville Municipal Building, Millville, New Jersey to discuss the results of the RI/FS and the preferred remedial alternative for the Nascolite Corporation site. A summary of verbal and written comments received during the public comment period of August 8, 1986 to August 29, 1986 along with letters received by NJDEP are attached as Appendix A.

On March 7, 1988, EPA briefed local officials and held a public meeting at the Millville Municipal Building in Millville, New Jersey to discuss the RI/FS and the preferred remedial alternative for groundwater cleanup at the Nascolite site. The meeting was attended by EPA; NJDEP; TRC, NJDEP contractor for the site; local officials, residents, and the media. A summary of verbal and written comments received during the public comment period of February 26, 1988 to March 25, 1988 follows. All letters received by EPA and EPA's responses during this comment period are attached as Appendix C.

Summarized comments from the March 1988 public comment period are categorized by the following topical concerns:

Health and Safety.
B. Nature and Extent of Contamination.
C. Residential Property Concerns.
D. Preferred Remedial Alternatives.

A. Health and Safety

Comment: A resident requested information on detecting poly methyl methacrylate (MMA) contamination in drinking water.

EPA Response: If MMA was in the water, there would be a distinctive odor. Accumulation of MMA in water is gradual; however, EPA plans to continually test wells in the area the plume of groundwater contamination is suspected to be moving; this would identify any potential contamination prior to any significant public health risk. EPA will be initiating new [illegible] of well sampling in the coming weeks.

Comment: Residents along Doris Avenue and local officials expressed an interest in EPA incorporating the connection of households along Doris Avenue to the municipal water system as part of the Record of Decision (ROD).

EPA Response: Under Superfund policy, EPA can only consider hooking up residents to a municipal water supply as part of the ROD contamination of wells exists or is imminent. Superfund policy emphasizes the long term permanent solution of remediating the groundwater. While hooking up households to the municipal water supply might reassure residents along Doris Avenue, it does not provide a permanent cleanup of the contaminated groundwater. EPA will, however, consider requests to hook up the houses along Doris Avenue as part of the ROD.

Comment: A resident inquired if there would be any effect on private wells as a result of pumping and extracting groundwater for cleanup.

EPA Response: Pumping of the groundwater should not affect private wells, however, EPA will be constantly monitoring to detect any problems.

B. Nature and Extent of Contamination

Comment: A resident asked where contaminants removed from the Nascolite Corporation site during the removal action had been disposed.

NJDEP Response: Contaminated materials removed from the site were incinerated at an approved RCRA disposal facility.

Comment: A resident expressed concern over the contaminant MMA that was detected in the aquifer.

EPA Response: During previous testing, EPA detected a MMA product floating on top of the aquifer. However, subsequent testing indicates that it is no longer in that location. EPA suspects that it might have polymerized and dropped to the bottom of the aquifer where it would no longer affect the groundwater.

Comment: A resident inquired about the necessity of further remedial activities if the contaminants were determined to be harmless, and whether additional studies would be necessary.

EPA Response: A contaminated plume has been detected in the groundwater and this contamination must be treated. EPA will also be initiating a supplemental feasibility study emphasizing in-situ treatment methods for soil remediation in the near future.

C. Residential Property Concerns

Comment: A resident inquired if reimbursement from the New Jersey State Spill Compensation Fund is available to compensate for lost property values as a result of the Nascolite Corporation site.

EPA Response: Questions about the availability of funds under the New Jersey State Spill Compensation Fund to compensate for lost property values as a result of the contamination at the Nascolite Corporation site need to be addressed to David C. Mack, Acting Administrator, Environmental Claims Administration, 401 East State Street, Trenton, NJ 08625.

Comment: A resident inquired about the ownership of the Nascolite Corporation site property following remediation.

EPA Response: The question of ownership of the Nascolite Corporation site property has not yet been resolved. However, ownership of the property may revert to the town in lieu of back taxes on the property, or EPA may use the value of the property in the recovery of cleanup costs.

D. Preferred Remedial Alternative

Comment: A resident inquired about how the reinjection process works.

EPA Response: EPA's goal is to reinject the treated water upgradient of the site which would force the contaminated plume towards the extraction wells.

Comment: A resident inquired about the possibility of discharging effluent from the air stripper into the municipal sewer system.

EPA Response: EPA evaluated using the municipal sewer system for discharging the effluent from the air stripper and determined that this was an acceptable remedial alternative. However, in this particular case, the municipal sewage authority has expressed a preference that EPA not use the municipal sewer system.

Comment: A resident inquired into the number of proposed recovery wells.

EPA Response: The exact number of wells will be determined during the design phase of the remedial action.

Comment: A resident inquired how collected groundwater contaminants will be treated.

EPA Response: Contaminants will more than likely be collected on a media, like an activated charcoal filter. When the filters are full they will either be cleaned and reused or removed and disposed of at an off-site facility.

Comment: A resident inquired as to why her organization's letter regarding cleanup alternatives was not responded to during the public comment period conducted subsequent to the initial release of the RI/FS by NJDEP in 1986.

EPA Response: Since the Superfund Law was amended during the 1986 public comment period and required additional testing at the Nascolite Corporation site, NJDEP deferred signing a Record of Decision at that time. As a result, there was no formal response to any letters received during that public comment period. However, EPA is factoring all comments received from both the 1986 and 1988 public comment periods into this Record of Decision.

IV. Remaining Concern

The remaining concern of residents focuses on the issue of soil remediation. Residents attending the March 7, 1988 public meeting in Millville, New Jersey inquired into the methods available for soil remediation. EPA officials explained that there are several possible methods. One method involves physically washing the soil with some kind of liquid that pulls out the contaminants. A second method involves heating the soil just enough to drive off the chemicals and capture the chemical gases in some type of carbon filtration unit. A third method involves incinerating the soil and destroying the chemical. A fourth method involves chemically fixing the soil. A fifth method involves biological treatment to break down the chemicals and render the soil harmless. EPA explained that all five techniques are being tried in some form at other Superfund sites. Residents also inquired into specific devices such as rotary kiln incinerators and portable calcifying units for possible use in soil remediation. EPA officials explained that they will examine all possible methods and techniques for soil remediation and that a supplemental feasibility study emphasizing in-situ treatment will be initiated in the near future.

APPENDIX A

APPENDIX A
VERBAL COMMENTS AND NJDEP RESPONSES
FROM THE PUBLIC COMMENT PERIOD
OF AUGUST 8, 1986 TO AUGUST 29, 1986

Comment: The study took two years and four months to complete. Will it be another two years before the site is cleaned up? What is your timetable?

NJDEP Response: The design phase may take nine months to one and one-half years to complete. It will probably be three to five years before soils are removed and a groundwater pumping system is installed. Groundwater cleanup may take approximately 15 years. When the study was initiated, NJDEP attempted to identify problems of immediate concern to public health and environment and none were found. Any immediate concerns identified in the future would be addressed accordingly.

Comment: The New Jersey Department of Health (NJDOH) has provided me with cancer statistics for this area. These statistics do not include people who move out of the area and die of cancer. Many people have died of cancer on Doris Avenue; five people out of twenty who live there have died. Methyl methacrylate (MMA) scares me to death...We don't trust the water on Doris Avenue and have been purchasing bottled water. I don't want to hear five years from now that my daughter has cancer.

NJDEP Response: NJDEP, EPA and NJDOH all concur that there are no immediate public health threats posed by the site. None of the deaths on Doris Avenue have been attributed to the site. MMA is not a known carcinogen. The National Toxicology Program recently completed a two year cancer study and did not find any evidence of cancer caused by MMA. The compound is known to cause irritation of the nasal passages and respiratory tract, but the odor is detectable long before any effects are noted.

Comment: Some water tests conducted by the state in the past were inaccurate. How will you guard against this in the future?

NJDEP Response: Our tests will be conducted by a state certified laboratory. Data will not be released until it has passed NJDEP's strict quality assurance requirements.

Comment: If contamination is not identified in the local potable wells, will there still be some type of remedial action?

NJDEP Response: Contamination found in both the soils and groundwater has the potential to migrate and eventually threaten potable wells. On this basis, remedial actions addressing soils and groundwater will be conducted.

Comment: Why are you taking air samples? This is a waste of money because MMA has a detectable odor at such a low level.

NJDEP Response: On-site air monitoring is required to protect the personnel on-site and guard against potential off-site dangers.

Comment: NJDEP stated at the first public meeting that each home on Doris Avenue would be tested. We did not receive any sampling results.

NJDEP Response: The question at the first meeting was, "Will they test wells on Doris Avenue?" NJDEP responded that wells would be sampled, but did not mean to imply that all wells would be sampled. NJDEP selected representative homes for sampling based on hydrogeological experience in the area. In view of the concern expressed at the public meeting, NJDEP will sample all the homes on Doris Avenue.

Comment: Our well was tested and found to have very high lead levels. Our dog has developed liver problems which the veterinarian associates with lead. While we were on vacation, NJDEP called our home and questioned my mother-in-law, who does not live in our home, about our well. She told NJDEP that she did not think our well was used for drinking water. Why did it take eight months for us to be notified of the high lead levels? You should not have taken information from my mother-in-law who does not live at the property. Why were we notified by Cumberland County and not by the State? What are the heavy metals identified at the edge of the site? Other residents and establishments on Delsea Drive are having water problems as well, and we submitted a petition to the City Commission asking that we be hooked up to the municipal supply.

NJDEP Response: The lead level in this particular well is not considered to be "very high", but only slightly above standard. NJDEP's procedure for notifying well owners of contamination is to contact county health officials who then notify the owner. We were informed, when we called your household on two separate occasions that the well was not used for potable purposes. We do not have any reason to believe that any off-site potable wells are affected by the Nascolite site. The heavy metals found at the edge of the site do not readily migrate and were not found in off-site downgradient wells. The Superfund Law (and Spill

Fund Law) cannot fund hook-ups to municipal water supplies without proof of well contamination being related to a site. The problem in your well may be attributable to indoor plumbing.

Comment: Are there any geological complexities that make groundwater flow direction difficult to determine? Is there a chance that a contaminant could be migrating off-site through a vein?

NJDEP Response: While in some respects the geological setting is not perfectly straightforward, the affected formations could be adequately defined for purposes of the study. The report discusses the possibility of preferential lateral movement along a lens of lower permeability, but it is highly unlikely that this could result in off-site migration that was not detected.

Comment: Is the value for hydraulic conductivity presented in the study referring to vertical or horizontal conductivity? The report's upper value for groundwater flow velocity is very low compared to what others have calculated for the Cohansey Aquifer. You should cite a source for your formula. Are you dividing by a porosity figure? The Hazardous Waste Facility Siting Commission uses such a formula which gives more accurate velocity calculation.

NJDEP Response: We agree that the omission of a porosity factor resulted in a low estimate. However, this does not invalidate the main conclusions reached in the study. Because groundwater contamination exists, regardless of the flow velocity, remediation is still necessary. If a higher estimate was used, the anticipated effects on any receptors would not differ significantly.

Comment: The Cumberland Conservation League prefers Strategy C presented in the feasibility study, and we do not favor discharge to the sewage treatment system. An oyster resource is located downstream in the Maurice River within two to three tidal cycles of the plant. Oysters are able to bio-accumulate contaminants. We would also like to comment that NJDEP has done a good job on this project.

NJDEP Response: NJDEP will conduct a treatability study to determine whether the Millville treatment system can effectively treat the groundwater. If this alternative is selected, any discharge will meet current or future water quality criteria placed on the sewage treatment plant.

Comment: How deep did your wells go? Do you know the depth of the wells on Doris Avenue? Did you contact the homeowners there to see if they know? There are wells that are approximately 160 feet deep.

NJDEP Response: The depth of the shallow wells ranged from 15 to 25 feet, and the depth from the deep wells ranged from 40 to 60 feet. NJDEP attempted to ascertain the depths of all private wells that were sampled from the owners municipal records or state records. In certain cases, the information is not available and may or may not be considered reliable.

Comment: Millville City Commissioner (attending as an interested citizen) -What can local people do to protect their families? Can they drink their water? They have not received any sampling results. Also, the lines of communication should be kept open with the people around the immediate vicinity of the site.

NJDEP Response: NJDEP is confident that adjacent wells are not contaminated. The groundwater flow is in the opposite direction of the private potable wells sampled, and the sampled wells have not shown any evidence of contamination. NJDEP will monitor the groundwater in the vicinity of the site to ensure that there are no problems. On-going monitoring will include wells from homes on Doris Avenue. Monitoring will continue during and after the design and construction phases. Regarding communication with the public, the NJDEP Bureau of Community Relations maintains an aggressive program designed to keep the interested public well-informed of site status and developments. This may be accomplished through press releases, telephone contacts, public meetings, local briefings, the distribution of fact sheets, etc. However, NJDEP also encourages anyone with questions or comments to contact the Bureau directly. The number and address have been publicized through the sources above.

Comment: Will it take eight months for us to be notified if there is a problem?

Response: If contamination is detected above standards at a well that is used for potable purposes, an immediate advisory would be issued to the county health department, as per NJDEP standard procedure.

Comment: Are the discharge standards to the sewage treatment plant the same as for reinjecting into the ground? If in the design phase you found that you could not meet the criteria for reinjection, would you be forced to used the sewage treatment facility? I fear that because of the more favorable economics you would choose the sewage plant, which could do more harm.

NJDEP Response: Reinjected water will be treated to federal drinking water standards. If on-site pretreatment with discharge to the municipal treatment plant is significantly more advantageous than full on-site treatment and reinjection, then EPA and NJDEP would be obligated to choose this alternative. The most cost-effective treatment and discharge option will be chosen. If discharge to the treatment plant is considered, NJDEP will meet with local officials and treatment plant personnel to discuss acceptable discharge parameters, costs and related issues before a final decision can be made. The treatment plant's continual ability to comply with its discharge permit would be of paramount importance.

Comment: If we don't agree with your final decision, when do have another opportunity to voice our objections? A three-week comment period is inadequate.

NJDEP Response: NJDEP will officially accept comments regarding the various alternatives during the public comment period. After considering public comments, a Record of Decision will be signed by EPA and NJDEP. A Responsiveness Summary will be part of the Record of Decision and will address all concerns that are expressed at the public meeting and submitted in writing. The National Contingency Plan requires a 21-day comment period and preparation of a Responsiveness Summary before a Record of Decision is signed. In addition, NJDEP is committed to working as closely as possible with interested communities throughout the cleanup process. Every attempt will be made to respond to community concerns.

Comment: How long will the groundwater contamination take to cross the border to the apartment complex?

NJDEP Response: Using a rate of four feet per year, it would take approximately 75 years. The contamination would be brought under control in approximately 12 to 15 years after initiation of treatment, which will be in 2 to 3 years. Furthermore, the outside fringes of the area to the south have very low-level contamination. The apartment complex is supplied with city water and does not rely on a well of its own.

Comment: NJDEP should consider less expensive sampling, such as gas chromatograph or volatile organic scan or testing for heavy metals to look for specific problems.

NJDEP Response: In further potable well testing, analyzing only for certain fractions, rather than for all priority pollutants, will be considered.

Comment: Do drinking water standards exist for volatile organics with respect to discharge to a sewage treatment system or on-site reinjection? Can the standard for both reinjection and discharge to the sewage treatment plant be made available to the public?

NJDEP Response: In both cases, the applicable standards are determined on a case-by-case basis depending on flow volume, treatment plant requirements, aquifer characteristics and useability, and other factors. The discharge limitations would be developed in the course of our discussions with City officials and treatment personnel.

Comment: Are you talking about Federal or State standards for water quality criteria? If Federal, is it true that some contaminants do not have standards set?

NJDEP Response: The applicable standards are Federal Standards. It is true that not all contaminants have water quality standards. In this case, a standard for volatile organics may be applicable.

Comment: What deed restrictions will be placed on the site and will they encompass the entire site? How will future sales of the property be affected by the Environmental Cleanup Responsibility Act (ECRA)?

Response: Until additional studies are completed NJDEP is not in a position to address these questions.

Comment: Little or no effort was made by NJDEP or the consultant to take Nascolite up on their offer of assistance in identifying the source of contamination.

NJDEP Response: NJDEP maintains that at no time was any offer of assistance received. Certain information was volunteered, although this was never any more than a general denial of wrongdoing and not potentially helpful to NJDEP and its investigation.

Comment: Ms. Villano observed the tanks immediately after they were removed from the ground and says they contained no obvious holes. However, the next day the tanks had been torched in several locations. An inquiry should have been made as to the source of the contaminants within the tanks.

NJDEP Response: It is highly unlikely that the holes in the tanks were made subsequent to the tank excavation. The contamination found in the ground, in terms of its quantity, distribution and chemical composition is readily explained under the scenario of perforated tanks being used for disposal and very difficult to explain any other way, even assuming that the tanks leaked. The above statement and the affidavit submitted by Ms. Villano ask EPA and NJDEP to accept that the several rows of equally spaced, approximately 6-inch-long holes, at least 60 in number, in a thick tank approximately 30 feet long, mysteriously appeared between one day and the next. Given the contamination found in the tank and in the ground, credulity is severely strained by Nascolite's explanation.

Comment: NJDEP should have more thoroughly investigated Cumberland Recycling as a potential source of groundwater contamination especially because: 1) earlier NJDEP investigations had recognized Cumberland as a potential source; 2) the wells installed by the consultant on Cumberland's property were not representative of whether a source of pollution existed there; 3) the hydrogeological investigation reveals a southeasterly flow from the Cumberland Recycling onto the Nascolite site.

NJDEP Response: NJDEP and EPA disagree with the premises and conclusions contained in the statements. The wells installed on Cumberland's property, together with the wells on the Nascolite site and the soil and waste samples taken during the investigation, provide an adequate basis on which to draw conclusions regarding the source of groundwater contamination in the area. The solvents and other chemicals that Nascolite claims never to have used were commingled with MMA in the waste samples taken from the tank and in the soil samples. The area of highest MMA contamination is in the immediate vicinity of where the tank was excavated. MMA was not known to be used by any company in the area other than Nascolite. In addition, the pattern of groundwater contamination does not support the view that there may be an off-site source or that Cumberland Recycling is a potential source. Well number 10 is contaminated with organics, yet is not hydrogeologically downgradient from Cumberland and was not contaminated. Contamination is highest at well 8 on Nascolite's property and is present in decreasing concentrations to the northwest south and southwest. The sample from well 8 contained the same constituents found in the soil in that area, which were the same found in the excavated tank. The materials were commingled in all cases. Therefore, EPA and NJDEP conclude that there is ample basis on which to identify Nascolite as the source of contamination in the area.

Comment: The report notes that increased conductivity readings in the area north of the plant were probably "due to contamination". Another potential source for the higher readings may be the fill material present in the vicinity of the very tanks in that area.

NJDEP Response: Since the contamination that could have caused the elevated conductivity readings was actually found, the inference that the readings were probably due to contamination seems the most probable conclusion. Also, fill material normally has a lower conductivity than native materials.

Comment: Water levels for monitoring wells 8s and 12s could have been determined despite the presence of liquid on the top of the water table by measuring the thickness of that liquid and subtracting it from the measurement.

NJDEP Response: The reason for not determining water levels in this manner in wells 8 and 12 is that the water table would be depressed due to the presence of a floating product layer, so the determination would be misleading. Wells 9, 10, 11, 13, and 14 were not affected by floating product, and measurements at those wells were used to depict the water table contours in the area.

Comment: Please describe how the construction materials, namely the casing and screens, were cleaned prior to installation.

NJDEP Response: The casing and screen were steam cleaned in the field, washed with alkanox, then rinsed with methanol followed by deionized water.

Comment: What measures were taken to insure the integrity and security of the wells installed by the consultant?

NJDEP Response: The wells are equipped with locking caps.

Comment: Reference is made on page 49 of the investigation report to the northwest direction of the groundwater movement in the northern part of the property being created possibly by draw-down from the pumping of local wells or from the mounding of the viscous lighter-than-water product on the water table which creates a higher hydrostatic head from which the ground water flows. Observation of a viscous product in two wells is sufficient to support the latter conclusion. Moreover, measurements of the water table in those wells would be necessary to confirm that assumption. Furthermore, the report does not indicate any examination of the frequency and effects of pumping of local wells in the area other than to note that it may be a factor. Please provide a map showing all pumping wells in the area and address possible effects they would have on groundwater flow. Indeed, the gradient and direction of flow could change if the pumping from nearby wells is variable. Why did the consultant not monitor water levels over a period of time to insure that the flow patterns do not change?

NJDEP Response: Interviews with the well owners indicated that pumping of the wells is both infrequent and limited in volume. Although the report states that drawdown from pumping of local wells may be a factor in area groundwater flow characteristics. The volumes appear to be too low to cause change in flow direction. The observation of a lighter-than-water product layer in wells 8 and 12 is indicative of a body of floating product covering a fairly large area, which could easily have the effects that were described. For reasons discussed above, NJDEP believed that accurate measurements of the water table levels at wells 8 and 12 were impossible; however, EPA and NJDEP are confident of the direction of the groundwater flow based on the other monitoring wells.

Comment: The report indicates that the flow in the shallow zone is to the southwest. Figure 5-6 shows, however, that the flow direction based on TRC's contour map is in part in a southerly and southeasterly direction. At the public meeting held on August 18, 1986, the consultant conceded this error. The error has significant consequences in terms of identifying the source of contamination on the property. Please indicate whether the consultant's acknowledgement that the groundwater flows in part from the northwest changes its conclusion relating to potential sources of contamination. If it does not, please explain why the change in direction is not significant in that regard.

NJDEP Response: Whether the flow is to the southwest, or to the south and southeast, Nascolite still appears to be the source of groundwater and soil contamination found.

Comment: The investigation attempted to analyze the gross alpha and gross beta for a groundwater sample collected from MW-8S to determine the presence of radioactivity. Background conditions need to be evaluated before the determination can be made as to whether the contamination is causing the radioactivity or whether it is natural occurrence.

NJDEP Response: Additional testing needed to characterize the extent of radioactivity will be performed during an additional phase of the remedial investigation, which will occur in the near future.

Comment: The report notes there is no EPA method or other published standard for analyzing MMA. What was the laboratory's reason for analyzing by the purge and trap method? Moreover, does not the arbitrary selection of a method put the results obtained in question?

NJDEP Response: Although there is no analytical method specifically designed for MMA, it is a listed waste that qualifies under the SW846 analytical methods. The purge and trap method is entirely valid for analyzing such a compound.

Comment: The table does not provide the limit of detection and dilution factor for all samples. This information is significant since the closer the value to the limit of detection, the less reliable it is. Moreover, some of the limits of detection indicated are inconsistent. For example, the limit of detection for toluene and chlorobenzene for WM-1 are different by a factor of 10 while they are identical as they should be for WM-8A. Please explain this discrepancy and provide the limits of detection and dilution factors requested.

NJDEP Response: Detection limits are all provided in the data summary tables. Dilution factors were not provided in the report but were reviewed under the data quality check. Dilution of samples is required under standard laboratory procedure and does indeed affect detection limits for a given sample. This does not in any way raise doubt as to the validity of the results.

Comment: In the second paragraph there is a reporting error, namely benzene is indicated as being measured at 259 ppm on the table but is reported in the text as 294 ppm.

NJDEP Response: The comment is correct. The discrepancy is due to an editing error. The correct volume is 259 ppm.

Comment: There is a reference to benzene and toluene being used to thin MMA. Some effort should have been made to interview the suppliers of MMA used by Nascolite to determine if such organic compounds could have been mixed with their product prior to shipping to Nascolite.

NJDEP Response: The objective of the study was to depict environmental conditions at the site, not to determine the original source of all contaminants per se. As discussed above, NJDEP and EPA are confident that they have sufficient knowledge of the environmental conditions to support their decisions in terms of remediation.

Comment: The proximity of MW-8S to Cumberland Recycling and indeed the location of MW-12S on that property raise a question as to the source of that contamination.

NJDEP Response: As discussed above, the magnitude of the contamination in well MW-8S and nearby soils, the similarity between that contamination and the contents of the perforated tank, the lessening of contaminant levels in proportion to distance from well MW-8S and the presence of the same constituents in downgradient and nearby wells including MW-12 all suggest the North Plant area is the source of the contamination.

Comment: The results for MW-55 and MW-105 indicate the presence of several common lab contaminants. Please provide the results of the laboratory blanks associated with those samples.

NJDEP Response: Additional work will be done during the remedial design to define the extent of the plume. The results of blanks analysis is not available at this time.

Comment: The high lead concentrations found alongside of the railroad tracks may be attributable to the Conrail facility. Were any soil samples taken from the other side of the Conrail tracks to determine whether they contain similar metal contamination?

NJDEP Response: No soil samples were taken from the other side of the railroad tracks. After any study it is possible to find areas where more sampling would have been useful. At Nascolite, where excavation is proposed as a remedial alternative, extensive additional sampling will be needed to determine the limits of excavation.

Comment: Reference is made to monitoring wells MW-7D, MW-8S, MW-11S, and MW-12S. These wells, which are located along the railroad tracks, contain levels of concentration of chlorinated compounds greater than those associated with the waste samples taken from the underground tanks, indicating that the source of those compounds are from off-site.

NJDEP Response: The waste samples taken from the Nascolite were diluted in accordance with standard laboratory protocol. Detection limits for those samples with several odors of magnitude higher than for groundwater samples at the wells cited. Therefore, waste sample results that were reported as "less than" followed by a relatively high detection limit do not indicate the absence of those substances. For several chlorinated compounds, such as chlorobenzene and trichloroethylene, the levels found in the waste samples may be considerably higher than in the groundwater, although the exact concentration could not be determined.

Comment: MW-7S reflected high levels of various solvents but no MMA. Considering the proximity of this well to Cumberland Recycling and the lack of MMA, a strong inference can be drawn that the source of the contamination found in this well is coming from off-site. The same is true of MW-7D. For Table 7-4, please provide the limit of detection for each of the parameters found.

NJDEP Response: MMA is not particularly soluble in water, therefore we would not expect to find it in groundwater at a considerable distance from the source. Since MW-7D contained the same volatile organic contaminants at lesser concentrations as were found in the North Plant area, it is quite reasonable to infer that the North Plant area is the source of those contaminants.

Comment: In the first paragraph of Section 7.4.2, the findings of contamination are generally characterized as of high concentration. Please provide what concentrations for each contaminant NJDEP considers "high" and the point of reference for such characterization. In the last sentence of that page concentrations of various metals are noted but no indication is given that any background samples were analyzed to determine whether such concentrations were naturally occurring in the soils.

NJDEP Response: "High" concentrations are relative to background. When contamination is encountered at levels equivalent to a percentage of the matrix sampled, as at the Nascolite site, "high" would be an understated way of describing such contamination.

Comment: On Figures 7.2 to 7.7 contours of contaminant concentrations are drawn between test pits presumably to get a cross section of the area to reflect levels of contaminant concentration. These figures are unreliable because in most instances contours have been drawn based only on one data point. Obviously a contour line cannot be drawn without a minimum of two data point to extrapolate between.

NJDEP Response: The figures give an approximate geographical picture of subsurface conditions. The many dotted lines and question marks suggest that these figures are not intended to be used as accurate representations or for any purposes requiring specificity. The actual data can be used for those purposes.

Comment: We believe that the issues raised in the comment period will require a total rethinking of the feasibility study once they are resolved. We urge NJDEP to convene a meeting of the respective consultants to insure that the cleanup proceed only after all parties are satisfied that the sources of contamination have been conclusively identified.

NJDEP Response: Nascolite Corporation's concerns that the RI/FS prepared by TRC consultants may be deficient in that it did not reflect a thorough investigation of all potentially responsible parties and that it did not investigate all sources of groundwater contamination in the vicinity is isplaced. The RI/FS was designed to define the vironmental problems at the site, with specific jectives to investigate the presence of hazardous substances at the site, and to develop and evaluate remedial alternatives. Neither an investigation to determine all the potentially responsible parties, nor an investigation of off-site groundwater contamination sources not contributing to the on-site contamination were within the scope of the RI/FS. Therefore the study is not deficient for the reasons suggested by Nascolite. NJDEP realizes that the RI/FS does not answer all questions regarding the Nascolite site and does not claim that the parties identified in the RI/FS make up an exhaustive list of all potentially responsible parties. However, NJDEP and EPA believe that to postpone the clean-up of the Nascolite Superfund site merely because of one party's concern that absolutely all potentially responsible parties have not been identified would be shirking its responsibilities to the citizens of the State of protecting human health and the environment.

Comment:	The Citizens United to Protect the Tidal Maurice River and its tributaries ask that NJDEP select strategy "C" as the most acceptable method of remedial action: "complete soil/waste extraction with off-site disposal; groundwater extraction with on-site treatment and reinjection of the treated effluent; and refilling, regrading and revegetation of the excavated soil/waste areas". Citizens United is strongly opposed to A-1, B-1 and C-1 as methods of remediation, primarily due to the proposed use of the Millville Sewage Treatment Plant.
NJDEP Response:	NJDEP has proposed that the option that you have the most preference for is our most preferred remedy also. Because of various considerations, we prefer reinjection of the treated groundwater over utilizing the Millville STP.

APPENDIX B

APPENDIX C

APPENDIX C

Issue: A citizen states that he lives less than a mile north of the Nascolite site and he is concerned about the site possibly contaminating his private drinking water well.

Response: The direction of groundwater flow in the area of the Nascolite site is predominantly to the southwest. The contamination from the site is traveling away from the citizen's home. Therefore, we can assure him that his well is in no danger from Nascolite site contamination.

March 9. 1988..

Alfred Hekmann Jr.
305 Clayville Switch
Vineland, N-J.
08360

E. P. A.

.. I read the article about Nascolite in the Atlantic City Press and I have been concern about it for a long time. I live just north of Nascolite - less than a mile from it and when they were in operation and the wind was from the south the stinking oder was worse than any farmers chicken manure. It was sickening. I have lived here for 47 years and I am getting a little bit worried about my well water, but I am on a fixed income and cannot afford to pay to have my water tested if it costs as much as I have heard it does I also live right next door to Riggins Oil Co. which is a very big company with several big gas and oil storage tanks and several big hauling rigs and I also wonder about them. I live about one block off of Main Road a water main and there is only 2 house back here, so if my well should go bad I would be in a bad fix. It makes me feel that between perty taxes and the high cost of living that I

APPENDIX D

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION II
26 FEDERAL PLAZA
NEW YORK, NEW YORK 10278

AGENDA

Public Meeting
Nascolite Corporation Site
Millville Municipal Building
Fourth Floor Commission Chambers
Millville, New Jersey

March 7, 1988
7:00 P.M.

I.	Introduction	Isabel Puncia, Superfund Community Relations Specialist Office of External Programs U.S. EPA, Region II
II.	Site History and Background of the Nascolite Corporation Site	Robert Smith, Consulting Engineer for the Nascolite Corporation site TRC Environmental Consultants
III.	Update on Site Activities	Ed Putnam, Assistant Chief Bureau of Site Management N.J. Department of Environmental Protection (NJDEP)
IV.	Presentation of Preferred Alternative and Discussion of Future Activitites	John Frisco, Chief of the New Jersey Remedial Action Branch U.S. EPA, Region II
V.	Questions and Answers	
VI.	Closing	

APPENDIX E

Naseolite Public Meeting March 7, 1988
Millville Municipal Complex

NAME	Address	Affiliation
Shelly Baker	615 Doris Avenue Millville	[illegible]
Kay Ruddrow	Cedarville	Bridgeton Evening
Jerry Vanaman	707 N. 10th, Millville	The Press of Atlantic
M Paston	995 Odessa Dr., Vld	BSO
R Baldt	613 Doris AV. millville	
Lucretia & Isabella Villano,	517 Doris Ave, M.	
Thomas F. Harrison	Wash. D.C.	
George L. Graf	Wilmington DE	
Robert B. Rector	Wilmington, De.	
Lorraine Morgan	Vineland	Millville Bd Health Dept.
Loui C	Vld.	
Cynthia Ferri	141 Charles Place Millville.	Oper. Eng. Local
Sharon Gray	7 Wildwood Ave Millville	
Dale Finch	City Hall, Millville	City Commiss
William J McCafferty	City of Millville	City Engine
Emil Van Hook	City of Millville	City Commission
Rob't Tom Douglas	" "	Superintendent Sewer U
Rob Swanson	" "	CITY COMMISSION
Janet & Warren Bailey	Dividing Creek resident	Property owner Di
Sharon Sparks	Millville, NJ.	

Sign In Sheet

NAme	Addess	Affiliat
James Schnitzer	401 E State St, Trenton	NJL
Steve Mac Gregor	" "	"
Bob Soboleski		
Gerritt W. Kenyon	1700 Wheaton Ave. Millville	Ne
Manuel Ostroff	740 E. Commerce St Bridgeton	County Wel

APPENDIX F

August 28, 1986

Mr. Anthony Farro
Assistant Director
Division of Hazardous Site Mitigation
428 E. State St.
Trenton, NJ 08625

Dear Mr. Farro:

At a recent public meeting held at Millville Commission Chambers Monday, August 18, 1986, your department outlined their findings on the Nascolite site.

In your review of remedial action alternatives for site clean up, your panel discussed discharge to the Millville Sewage Treatment Plant following on-site treatment. It was noted that the standards for reinjecting treated waters into the ground are more stringent than those for sewage disposal. We ask that you opt for an alternative that doesn't involve placing toxins into a municiple sewage facility, since it is not designed to further detoxify hazardous waste. Accordingly, we find alternative "C" the most acceptable method of remedial action: "complete soil/waste excavation with off-site disposal; ground water extraction with on-site treatment and reinjection of the treated effluent; and refilling, regrading and revegetation of the excavated soil/waste areas". Citizens United is strongly opposed to A-1, B-1 and C-1 as methods of remediation.

Economics is certainly going to play a factor in your decision making process, please consider the following arguement. Your department was created to protect the environment and citizens of New Jersey. While certain methods of remediation may

Dedicated to the Preservation of the Maurice River Valley

CU
CITIZENS UNITED TO PROTECT THE TIDAL
MAURICE RIVER AND ITS TRIBUTARIES
P.O. Box 126 ☐ Millville, NJ 08332

prove less costly to your department, the consequences of such procedures may prove more costly to the very citizens you are entrusted to protect. If you select one of the less desirable alternatives, you may find your economic objectives self-defeating.

Our organization's purpose is to protect the Maurice River and its tributaries from adverse impacts. The Maurice River is a support system to a wide variety of wildlife. Its quality is fundamental to the existance of our local fishing industry. The river affords many recreational pleasures to local citizens. Citizens United is committed to preserving and maintaining the river for now and for the future. Please join us in our committment.

Sincerely,

CITIZENS UNITED TO PROTECT THE
MAURICE RIVER AND ITS TRIBUTARIES

Jane M. Galetto

Jane Morton Galetto
Vice President /ku

JMG:des

cc: Richard Dewling
Sumner Lippincott - Millville Commissioners
Charles Fisher-Cumberland County Freeholders
Dr. Patrick Slavin
Christopher J. Daggett

KIRSTEN, FRIEDMAN & CHERIN
A PROFESSIONAL CORPORATION
COUNSELLORS AT LAW
17 ACADEMY STREET
NEWARK, N. J. 07102
(201) 623-3600

RICHARD E. CHERIN*
HAROLD FRIEDMAN
JACK B. KIRSTEN*
PHILLIP LEWIS PALEY**
DENNIS C. LINKEN
ROBERT A. VORT*

JOSEPH HARRISON (1930-1978)
MILTON LOWENSTEIN
OF COUNSEL

MARGARET E. ZALESKI
JOHN K. ENRIGHT
SHARON MALONEY-SARL
LIONEL J. FRANK*
RICHARD M. METH
SARAH J. MCCORMACK

*MEMBER N.J. & N.Y. BARS
**MEMBER D.C. BAR

August 28, 1986

Mr. Jeffrey Folmer
New Jersey Department of
Environmental Protection
Bureau of Community Relations
428 E. State Street
Trenton, New Jersey 08625

Re: Nascolite Corporation

Dear Mr. Folmer:

Enclosed please find an original and one copy of the Comments and Exhibits of the Nascolite Corporation submitted in respect to the Remedial Investigation and Feasibility Study issued by TRC Environmental Consultants, Inc. regarding the Nascolite Corp. Superfund site. Also attached is an affidavit of Lucretia Villano, President of Nascolite Corporation. Because of time exigencies, the affidavit is unsigned. A signed and notarized original affidavit will be forwarded to you shortly.

It is my understanding from the public meeting held on August 18, 1986 that all questions raised in the enclosed correspondence will be responded to by the New Jersey Department of Environmental Protection. I look forward to that response.

RECEIVED
29 9 51 AM '86
DIVISION OF
WASTE MANAGEMENT
HSMA-RISE

Very truly yours,

John K. Enright

KIRSTEN, FRIEDMAN & CHERIN
A PROFESSIONAL CORPORATION
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17 ACADEMY STREET
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SHARON MALONEY-SAR
LIONEL J. FRANK*
RICHARD M. METH
SARAH J. MCCORMACK

*MEMBER N.J. & N.Y. BARS
*MEMBER D.C. BAR

August 28, 1986

Mr. Jeffrey Folmer
New Jersey Department of
Environmental Protection
Bureau of Community Relations
428 E. State Street
Trenton, New Jersey 08625

Re: Remedial Investigation and Feasibility Study
of TRC Environmental Consultants, Inc.
re: Nascolite Corp., Millville, New Jersey

Dear Mr. Folmer:

We represent the Nascolite Corp. with respect to the above captioned investigation. We understand that the Department of Environmental Protection ("DEP" or "The Department") will accept comments from the public until August 29, 1986. Please accept this letter as the response of Nascolite Corp. with respect to the above captioned reports.

Nascolite shares both the Department's and its neighbors' concern in the groundwater contamination problem that exists on its property. The principals of Nascolite Corporation, Lucretia Villano and her sister Isabelle live on Nascolite's property and depend on a potable well for their drinking water. During the entire investigation, Nascolite has tried to be cooperative with the Department and has made itself available to answer questions regarding Nascolite's operation. Toward that end, we, on behalf of Nascolite, have attempted from time to time to obtain status reports on the investigation in the interests of insuring that full and complete information was available to TRC while they [illegible] conducting their study. ①Despite our expressed interests, little if no effort was made by the Department or TRC to take us up on our offer of assistance. The reports unfortunately demonstrate the consequences of that lack of effort.

Before commenting specifically about the report, we think it might be helpful if we discussed how we got here. The genesis of the current investigation was in October of 1979 when the Cumberland County Health Department, which is charged with the responsibility for overseeing environmental matters in the Cumberland County area, was contacted by George Luciano to investigate possible contamination of potable wells located at his facility, a junkyard that operates under the trade name of Cumberland Recycling of South Jersey, Inc., and which adjoins Nascolite's property on its western border. Upon arriving at Luciano's facility, the County Health Inspector noticed the discharge of some water by Nascolite into a shallow ditch running directly behind its property. The County Health Department took several samples of private wells in the general vicinity as well as samples from the ditch in question. The private wells proved to be uncontaminated, while the ditch revealed the negligible presence of methyl methacrylate, a chemical utilized in the Nascolite process as well as small concentrations of other materials including various volatile organic compounds unassociated with the Nascolite operation.

Almost immediately thereafter, the DEP visited the facility and ordered the plant to cease all such discharges in the ditch as well as implement other changes to its operation. There then ensued a long period of negotiation between Nascolite and DEP, during which time, the Company, for various reasons, including the onerous requirements imposed by DEP, permanently ceased its operations.

During this period of negotiations, which lasted

Mr. Jeffrey Folmer
Page Four
August 28, 1986

from approximately the spring of 1980 to the spring of 1984, several monitoring wells were installed at the Nascolite property by DEP. Those wells revealed the presence of various volatile organic compounds at impermissible levels. ② During this period, Nascolite consistently maintained that those contaminants were not attributable to its operation and therefore had to originate from off-site sources. Despite Nascolite's arguments, DEP continued to take the position that Nascolite was primarily, if not exclusively, responsible for any contamination found in its groundwater and directed Nascolite to engage its own consultant in order to devise a detailed sampling and cleanup program for its property.

In the fall of 1983, Nascolite engaged BCM, a prominent environmental consulting firm, to devise such a

In April of 1984, before BCM submitted its plan, Nascolite was notified by Dale Lessne, Esq., of the New Jersey Department of Law and Public Safety, that DEP had entered into a cooperative agreement with EPA regarding the investigation of Nascolite and therefore any sampling and cleanup of the property would be performed pursuant to a remedial investigation and feasability study ("RI/FS") by TRC Environmental Consultants, Inc., an environmental consulting firm located in Connecticut.

③ Shortly thereafter, we inquired whether Nascolite could participate in the RI/FS and were told by Susan S[illegible]oca, Esq., a regulatory officer for DEP, that, pursuant to Administrative Order No. 69 Nascolite could participate in the development of an RI/FS, but only if it met certain conditions including an agreement to pay all the costs of the RI/FS in advance. Since Nascolite believed that it was not the party responsible for the contamination discovered in its groundwater, it declined to participate in the development of the RI/FS. We note by the way that recently the Appellate Division of New Jersey Superior Court has struck down Administrative Order No. 69 because it was issued in violation of the Administrative Procedure Act. Had it been subjected to the review procedures under that Act, conceivably it would not have concluded the onerous condition referenced above, in which Nascolite may have very well participated and been in a position to provide meaningful input to the study. Instead, Nascolite was effectively and practically denied that opportunity.

It is our position that the efforts of the New Jersey DEP in conjunction with the consulting firm TRC have been misdirected. The basis for our position stems in part from Nascolite's knowledge of its own operation and from our analysis of the Remedial Investigation Report issued by TRC. ④ In respect to its operation, Nascolite has consistently maintained the position that the types of volatile organic compounds found in Nascolite's groundwater, as well as any metals, would not have resulted from industrial processes utilized by Nascolite. In regard to that position, we have attached hereto a report of Dr. George Graff, a chemical consultant, who is knowledgeable of Nascolite's operations. As you will note from his report, he concludes that Nascolite is not responsible for the contamination which is the focus of the subject investigation. We might add that his report (Exhibit A) was prepare pursuant to our request prior to the release of TRC's report.

We were quite surprised in reviewing TRC's ⑤ report that materials taken from some of the underground storage tanks utilized by Nascolite contained some of the volatile organic compounds previously discovered in its groundwater. We do not have an explanation for this finding. (See affidavit of Lucretia Villano attached hereto as Exhibit B). We do note, however, that those tanks were used for storage purposes only and the operators of Nascolite never noticed any leakage from said tanks.⑥ We note, however, that Ms. Lucretia Vallano observed the tanks immediately after they were removed from the ground and that at that time they contained no obvious holes. However, the day after the tanks were excavated she discovered that the tanks from which sample WM-2 was taken by TRC had been torched in several locations subsequent to removal. To this day, Nascolite has not been able to determine the cause of those torched holes or the reason why they were placed in the tank. The history of vandalism at Nascolite, which is well documented in the files of the Millville Police Department, raises a question regarding the attribution of the condition of those tanks to Nascolite, and more importantly the attribution of the substances found within those tanks to Nascolite's operation.⑦ We would have thought that upon discovery of those substances within the tanks, an inquiry would have been made to Nascolite regarding their source.

Neither DEP or TRC chose to make such an inquiry. Certainly on the eve of a $7.5 million cleanup that targets Nascolite as the sole responsible party, further inquiry regarding the source of those substances is warranted.

The vandalism of the underground tanks was not the only unusual circumstance to befall Nascolite since it ceased operations. In 1983, several drums, which were on the Nascolite loading platform about to be removed offsite by a licensed hauler, were mysteriously axed causing the spillage of some methyl methacrylate onto Nascolite's property. Both Nascolite and Ms. Villano were indicted for that incident. The indictment alleges that an employee of Nascolite, Daniel Morgan, hacked away at the drums, thereby causing the discharge in question. However, the testimony before the grand jury of said employee was that he was instructed by Ms. Villano merely to open the lids of the drums in question to determine whether they contained any liquids; the reason being that the hauler would not take the drums if they contained any liquids whatsoever. The drums contained scrap methyl methacrylate which was, for the most part, in a polymerized state and had been left over from the time Nascolite ceased operation. The other principal witness before the grand jury was a Mr. Hoffman who was an inspector for the Cumberland County health department. He testified that he was called to the scene by Mr. Luciano, the owner of Cumberland Recycling, who informed him that someone was hacking away at the drums with an axe. Mr. Hoffman testified that he observed such a gentleman but he did not identify him to the grand jury as Mr. Morgan. Mr. Luciano also [illegible] photos of the alleged incident. However, those photos merely indicate an unidentifiable person standing behind drums which had, at that time, not been axed.

Once we were retained to represent Ms. Villano and Nascolite in this criminal matter, we brought a motion to dismiss on the basis of a lack of evidence before the grand jury. The prosecutor's office thereafter agreed to a plea arrangement dismissing the indictment against Ms. Villano and reducing the charges against the corporation from a second degree, (intentional discharge of hazardous waste) to a fourth degree offense (creation of a condition causing risk of widespread injury). The fine agreed to be paid by the Corporation was $500. Nascolite agreed to the plea because it did not require an admission to any purposeful act and because it allowed the Company to devote its energies to the Superfund investigation. We bring the criminal matter to your attention as another peculiar incident surrounding this investigation from its inception in 1979 to date. As discussed more fully below, ? we believe that a potential source of contamination is coming from off-site west of Nascolite. Our basis for our position is mainly derived from a disagreement as to the direction of the groundwater flow as indicated in the hydro-geological study conducted by TRC. Our position is further supported by a combination of logic and certain internal memos that were provided to us in the course of our review of DEP's files regarding the Nascolite site. The logic of our position is derived from the fact that spillage may occur from the tank cars that utilized those tracks. We have no evidence as to the nature of the substances spilled but certainly an inquiry by TRC would have been appropriate to determine whether Conrail may have contributed to the groundwater problem. We note that one of the major "hotspots" is adjacent to those tracks and contains substances not found elsewhere on the site. ⑨ The reference to the internal memoranda of DEP pertains to the memoranda of Bruce Venner dated October 25, 1983 and Joseph Douglas dated November 22, 1983 (Exhibit C). Both memoranda reflect a visit by them to the Cumberland Recycling property wherein they observed serious environmental conditions which they recommended be acted upon immediately. As you will note in said memoranda (copies attached hereto) their superior indicated that such an investigation, because Cumberland Recycling was a junkyard, was beyond his office's jurisdiction. However, clearly he had a responsibility to refer such information to the appropriate bureau within the DEP.

⑩ We have also enclosed another memordum of Mr. Douglas (Exhibit D) where he indicates other potential sources of pollution in respect to Nascolite's facility. There was apparently no effort on the part of DEP to investigate these other potential sources even though they had approximately four years to do so prior to designating

Nascolite as the Superfund site.

⑪ The recognition by DEP investigators that a source of groundwater pollution may exist on the Cumberland Recycling property should not have been ignored by TRC. From its report, it is clear that the groundwater wells located on Cumberland's property are located on the outer regions of same and were not conclusive as to whether a source of pollution may have existed on the property. The failure to conduct a more thorough investigation is even more shocking given the results of the hydro-geological study that reflects a southeasterly flow from Cumberland Recycling's property onto the Nascolite site. (Exhibit E).

We now turn to specific questions and comments regarding the remedial investigation of TRC. We would appreciate responses to all of our questions as well as the concerns expressed above. We implore the Department not hastily commence a multi-million dollar cleanup project without fully exploring the issues raised herein. We remain available to DEP to be of whatever assistance it may deem appropriate.

The following specific comments track the sequence of the findings of the remedial investigation report:

⑫ PAGE 20 - LAST PARAGRAPH:

The report notes that increased conductivity readings in the area north of the plant was probably "due to contamination". Another potential source for the higher readings may be the fill material present in the vicinity of the very tanks in that area.

PAGE 24 - TABLE 4-1:

Water levels for monitoring wells 8S and 12S could have been determined despite the presence of liquid on the top of the water tables by measuring the thickness of that liquid and subtracting it from the measurement.

PAGE 27:

The first paragraph does not describe how the construction materials, namely the casing and screens were cleaned prior to installation. Please describe.

PAGE 31:.

In the last full paragraph reference is made to the fact that the three monitoring wells installed prior to the investigation were not sampled because the well caps were not secured. What measures were taken to insure the integrity and security of the wells installed by TRC?

PAGE 49 - LAST PARAGRAPH:

Reference is made to the northwest direction of the groundwater in the northern part of the property being created possibly by draw-down from the pumping of local wells or from the mounding of the viscous lighter-than-water product on the water table which creates a higher hyrostatic head from which the groundwater flows. Observation of a viscous product in two wells is insufficient to support the latter conclusion. Moreover, measurements of the water table in those wells would be necessary to confirm that assumption. Furthermore, the report does not indicate any examination of the frequency and effects of pumping of local wells in the area other than to note that it may be a factor. Please provide a map showing all pumping wells in the area and address possible effects they would have on groundwater flow. Indeed, the gradient and direction of flow could change if the pumping from nearby wells is variable. Why did not TRC monitor water levels over a period of time to insure that the flow patterns do not change.

PAGE 54:

The report indicates that the flow in the shallow zone is to the southwest. Figure 5-6 shows, however, that the flow direction based on TRC's contour map is in part in a southerly and southeasterly direction. Mr. Beck at the public meeting held on August 18, 1986 conceded this error. The error has significant consequences in terms of identifying the source of contamination on the property. Please indicate whether TRC's acknowledgment that the groundwater flows in part from the northwest changes its conclusion relating to potential sources of contamination. If it does not, please explain why the change in direction is not significant in that regard.

PAGE 55 - LAST PARAGRAPH:

The investigation attempted to analyze the gross alpha and gross beta for a groundwater sample collected from MW-8S to determine the presence of radioactivity. Such analysis is insufficient to determine the presence of radioactivity. Background conditions need to be evaluated before it can be determined whether the contamination is causing the radioactivity or whether it is naturally occurring in the area.

PAGE 56:

The report notes that there is no EPA method or other published standard for analyzing methyl methacrylate. What was ETC's reason for analyzing by the purge and trap method? Moreover, does not the arbitrary selection of a method put in question the results obtained?

PAGE 61 - TAB[illegible]-2:

Th[illegible]e does not provide the limit of detection and [illegible]ution factor for all samples. This information is significant since the closer the value to the limit of detection, the less reliable it is. Moreover, some of the limits of detection indicated are inconsistent. For example, the limit of detection for tolulene and chlorobenzene for WM-1 are different by a factor of 10 while they are identical as they should be for WM-8A. Please explain this discrepancy and provide the limits of detection and dilution factors requested.

PAGE 62:

In the second paragraph there is a reporting error, namely benzene is indicated as being measured at 259 PPM on the table but is reported in the text as 294 PPM.

PAGE 63:

At the top of the page there is a reference to benzene and tolulene being used to thin methyl methacrylate. The source of this information is identified as publications of the Celenese Chemical Company. No indication is made as to whether this was a practice particular to that company or common throughout the industry. Some effort should have been made to interview the suppliers of the methyl methacrylate used by Nascolite to determine if such organic compounds could have been mixed in with their product prior to shipping to Nascolite. It is our position that they were not. If they were, this was done without Nascolite's knowledge and authorization and furthermore points to additional responsible parties.

PAGE 63:

In the first full paragraph the laboratory results for the monitoring well samples from MW-12S and MW-8S are discussed. The contamination found in those wells is attributed solely to Nascolite. However, the proximity of MW-8S to Cumberland Recycling and indeed the location of MW-12S on that property raise a question as to the source of that contamination. Figure 5-6, which is the contour map of water levels in the shallow wells, indicates a northwest water flow that would support TRC's position that said contamination is originating on Nascolite and flowing toward the Cumberland Recycling property. On the other hand, the presence of a viscous product floating on the top of those wells and the failure of TRC to fully investigate other causes for their findings supports a need for further testing to establish that the water flow direction is as interpreted by TRC.

PAGE 67:

The results for MW-5S and MW-10S indicate the presence of several common lab contaminants.

Please provide the results of the laboratory blanks associated with those samples. MW-4S reflected high levels of various solvents but no methly methacrylate. Considering the proximity of this well to Cumberland Recycling and the lack of MMA, a strong inference can be drawn that the source of the contamination found in this well is coming from off-site. The same is true of MW-7D. For Table 7-4, please provide the limit of detection for each of the parameters found.

PAGE 69:

In the first full paragraph of Section 7.4 reference is made to the disposal of MMA residues in underground tanks. Nascolite takes exception to this characterization since such underground tanks were used for storage only.

PAGE 72:

In the first paragraph of Section 7.4.2, the findings of contamination are generally characterized as of high concentration. Please provide what concentrations for each contaminant DEP considers "high" and the point of reference for such characterization. In the last sentence of that page concentrations of various metals are noted but no indication is given that any background samples were analyzed to determine whether such concentrations were naturally occurring in the soils.

PAGE 75:

The high lead concentrations found alongside of the railroad tracks may be attributable to the Conrail facility. Were any soil samples taken from the other side of the Conrail tracks to determine whether they contain similar metal contamination?

7-2 through 7-7:

On these figures contour of contaminant concentrations are drawn between test pits presumably to get a cross section of the subservice area to reflect levels of contaminant concentration. These figures are unreliable because in most instances contours have been drawn based on only one data point. Obviously a contour line cannot be drawn without a minimum of two data points to extrapolate between.

PAGE 94:

Reference is made to monitoring wells MW-7D, MW-8S, MW-11S and MW-12S. These wells, which are located along the railroad tracks, contain levels of concentration of chlorinated compounds greater than those associated with the waste samples taken from the underground tanks, indicating that the source of those compounds are from off-site.

CONCLUSION

The foregoing comments are intended to highlight the major weaknesses we found in the TRC's report. Given the short comment period, an exhaustive analysis was impossible. Moreover, we have not commented on the feasibility study because we believe that the issues raised here will require a total rethinking of that study once they are resolved. We urge the Department to convene a meeting of our respective consultants to insure tht the cleanup proceed after all parties are satisfied that the sources of contamination have been conclusively identified.

Very truly yours,

John K. Enright

JKE:bhp

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Wilmington, DE 19810
(302) 475 3723 (603) 585 9428

ANALYSIS OF ACTIONS BY THE N.J. DEPT. OF ENVIRONMENTAL PROTECTION VS NASCOLITE CORPORATION

To Whom It May Concern:

The purpose of this document is to comment on the activities of the New Jersey Department of Environmental Protection (DEP) against the Nascolite Corporation. The material considered is listed in the attached Appendix. These documents include DEP memoranda, test data and statements from the duPont Company regarding methyl methacrylate monomer (MMA).

It is my opinion that the DEP has failed to demonstrate that the Nascolite Corporation has caused or contributed to the pollution of the ground waters of the area. Further, DEP has failed to investigate other potential sources of pollution in the vicinity. These other sources use or may have handled some of the chemicals cited as pollutants of the ground waters. It is accepted that Nascolite is a potential source of methyl methacrylate monomer as a contaminant. However, the analytical data provided only cite materials not used in the Nascolite operations.

In the analytical data reported in App. I - 2 through 5, there are no quantitative values listed for MMA. The major chemicals found are either aromatic compounds or contain halogen molecules. The description of the Nascolite operations, App.

III-1, does not list any of the contaminants. Further, the memorandum App. II-1 does not describe any of the listed chemicals as being used in the conversion of MMA to polymethyl methacrylate (PMMA).

In the Friedrich to Sullivan document, App. II-1, a general description is given of the process used by Nascolite to produce PMMA sheet from MMA. This description of the process and the list of ingredients provided by the owner/operators is essentially accurate, reflecting Friedrich's notes and impressions. Except for typographical and occasional minor technical errors, the description and ingredient list are complete and inclusive of the Nascolite practices.

The materials used or processed in the plant are listed with the approximate volume of consumption. Among these listed materials there are no compounds which contain chlorine, chloride or halogen molecules. Further, the only compound which is composed of aromatic or phenolic - type constituents is Salol or phenyl salicylate. The consumption of this compound was "negligible". When this material is used it is bound internal in the PMMA. It is highly improbable that it would be available to water extraction.

Since no "chloride" containing materials and extremely low levels of "aromatic" base ingredients were used in the Nascolite process, one cannot logically attribute the ground water contamination to this plant. The water samples of 12/11/81 and 1/29/82. App. I-3,4, do not indicate a Nascolite source. The broad spectrum of aromatics and chlorine containing compounds of the 2/83 tests, App. I-5 also rule out Nascolite as a source. The soil samplings of 7/80 by Farnsworth, App. I-1, show MMA at levels which could be attributed to an operational "spill" such as is described in the 5/17/79 memo of N.A. Cameron, App. III-2. The ground water samples of 9/24/80, App. I-2, show no chemicals attributed to Nascolite.

In connection with the Cameron memorandum, App. III-2, concerned with an "Odor Complaint" in 5/79, it should be noted that MMA has a moderate level of volatility (See App. IV 2, 3). It boils at 101 C or 1 higher than water. Unfortunately. it can be detected by the "normal" human nose at a concentration of 1-2 million (ppm). In App. IV-3, the Threshold Limit Value for MMA for an 8 hour exposure is stated as 100 ppm. Hence, the human detection level is muchly lower than the concentration allowed by OSHA in the work place. Complaints may arise at very low concentrations of MMA in the atmosphere.

In App. II-1, Farnsworth prepared a memorandum which attempts to provide a connection between the many organic compounds found in the soil and ground water samples of 7/80 and 9/80 and the plastics industry. He infers that since these materials may be used in the plastics industry they will be found at Nascolite. None of these compounds are used in the manufacture of PMMA as practiced by Nascolite. Farnsworth has completely ignored the fact that these compounds are products of petroluem refining. Therefor they can or may be found in gasoline, diesel fuel, oils, lubricants, industrial solvents, etc.

Throughout the DEP memoranda and reports the phrase "it had a plastic odor" or "it smelled like plastic" is used. This statement is grossly inaccurate and can be misleading; especially to the non-technical person. Plastics are made from polymers, which are molecules of a very large size. Large, or high molecular weight polymers do not have an odor if the molecule is stable. Lower molecular weight or monomeric materials, additives used in compounding plastics, may be volatile and have an odor. The "normal" PMMA product such as the sheet produced by Nascolite and a number of other companies does not have an odor. Dentures, contact ophthalmic lenses, automobile tail-lights and instrument faces, lighting refractors, medallions and advertising signs are produced from PMMA. They do not have an odor. Hence, a "plastic" odor as attributed to Nascolite may have been from MMA. Or, the odor may have been from some other volatile chemical entering the area from another source.

In the memorandum of Douglas to McCann, App. II-2, it is stated that "Volatile contamination has been found in excess of 24,000 ppb". This contamination is attributed to MMA. These samples were from the soil in the ditch between the Nascolite plant and the yard of the Luciano Brothers Scrap Iron Co. Ground water samples taken during this time period do not report the presence of MMA (See App. I-1, 2).

Presumably on the basis of the above data, Douglas states "The Division has independently accumulated a substantial quantity of ground water monitoring data which confirm the existence of a severe ground water pollution problem at Nascolite." The data do not support that conclusion. Further, he admits that other abutters to the ditch may have contributed to the problem, but assigns responsibility without further testing ascolite.

Why has the DEP failed to obtain ground and water samples from other potential contaminant contributors? Douglas points out the presence of a well on the Luciano property but appears to have neglected to have this water analyzed. He suggests that the pollution may be hydraulically dispersed but has not made any effort to test waters outside the confines of the Nascolite properties. It appears that this case has been prejudged against Nascolite without the development of a sound scientific sampling and testing program.

These comments, observations and conclusions are based on examination of the information listed in the Appendix. Additional information regarding the program plans, samplir procedures and testing procedures and sensitivity/accuracy would have aided in developing a more definitive report.

George L. Graf, Jr. Ph.D.
Consultant
August 30, 1985

APPENDIX

DOCUMENTS CONCERNED WITH ACTIONS AGAINST NASCOLITE CORPORATION

I. ANALYTICAL/TEST DATA

1. Memo-Farnsworth 11/20/80 Soil and water samples 7/80
2. Memo-Farnsworth 11/20/80 Ground water samples 9/80
3. Quality Control Laboratory Tests-Wells #1,2,3 12/81
4. Quality Control Laboratory Tests-Wells #1,2,3 1/82
5. N.J. DEP Water analyses Wells #1,2,3 2/83

II. N.J. DEP MEMORANDA

1. Farnsworth to Hamilton - "Uses of organic compounds found in Nascolite soil/water samples" 12/80
2. Douglas to McCann -"Referral-The Nascolite Corp." undated

III. N.J. DEP MEMORANDA

1. Friedrich to Sullivan - Description of Nascolite Operations 12/70
2. Cameron to Mancini - Odor Complaint Investigation 5/79

IV. Product Information

1. Armitage - Letter - "Methyl methacrylate toxicity data" 2/80
2. Properties of methyl methacrylate monomer
3. OSHA Material Safety Data Sheet Methyl methacrylate monomer (ex: duPont Co.)

STATE OF NEW JERSEY)
SS: **AFFIDAVIT**
COUNTY OF ESSEX)

LUCRETIA VILLANO, of full age, being duly sworn, according to her oath, deposes and says:

1. I am the President of Nascolite Corporation and submit this affidavit in response to the Remedial Investigation Report submitted to the New Jersey Department of Environmental Protection by TRC Environmental Consultants, Inc.

2. During the entire period of time from approximately 1953 to 1980 when the Nascolite Corporation was in full operation at its present location, off of Doris Avenue, Millville, New Jersey, I was fully familiar with all aspects of its operation. Furthermore, since it ceased operations in 1980, I have been principally in charge of maintaining the security of the Nascolite premises. During that time I have continued to live with my sister Isabelle approximately 200 yards from the Nascolite plant.

3. The report of TRC concludes that a primary source in the contamination found in the groundwater at the Nascolite property is attributable to leakage from certain storage tanks located north of the Nascolite plant. TRC in its report sometimes refers to those tanks as disposal tanks and implies that Nascolite purposefully allowed waste contained in those tanks to leak into the sub-surface soil surrounding them.

4. During the plant's operation, I was never aware of any leakage problem involving those tanks which were used for the purpose of storing residue of methylmethacrylate. Such residue was pumped out of those tanks periodally and used as fuel for the burners utilized in the operation of the plant.

5. Those tanks were excavated in 1983 by William Perryman. I observed those tanks the same day they were excavated and noticed no holes or slits other than the capped holes in which we would insert hoses for pumping purposes. The following day however, upon returning to the location of the excavation, I found the tanks to have been punctured in several locations by persons unknown. One tank in particular had approximately a dozen punctures which had obviously been caused by a torch.

6. I submit that any contamination found in the tanks or in the sub-surface soil surrounding them were

placed there by persons unknown and were not the result of any activities conducted by Nascolite during its operation. I will be glad to supplement this affidavit in response to any further questions the Department of Environmental Protection may have regarding the circumstances and events addressed herein.

____
LUCRETIA VILLANO

Sworn to and subscribed before
me this day
of August, 1986.

____

11/1/83

DIVISION OF WASTE MANAGEMENT
BUREAU OF FIELD OPERATIONS

INVESTIGATIVE REPORT

Inspector: Bruce Venner	Date: 10/25/83	DWM Incident Report #:83-10-4-15
Company Name: Cumberland Recycling Corporation (Luciano Bros.)		Telephone: (609) 825-
Street: North Delsea Drive		Property Owner:
Town: Millville, New Jersey		Address:
County: Cumberland		
Lot:	Block:	
Type Ownership: Corporation		

Investigative Findings:

At approximately 0900 hours on the above date, I was met at my office Mr. Joe Douglas, Divisiion of Water Resources, Southern Region. While in t office, I notified the Vineland Health Department, Louis Cresci, and we pro to the facility.

At 1000 hours we arrived at a Conrail Yard located south of the Nascol facility and east south east of the Luciano Scrapyard. The purpose of this stop was so that Mr. Douglas could check a monitoring well located on-site. The well cap was locked and Conrail personnel could not find a key, so we proceeded to the Luciano Scrapyard. At 1025 hours we arrived.

After arriving at the facility, we notified the operator that we would like to speak with Mr. George Luciano. We were informed that he was busy a the moment, so we proceeded to tour the yard. During our tour, I noted man empty drums, junk automobiles, tires, trucks and buses. All of the things one would expect to find in a junk yard. There were three large puddles of water which were covered with a brown/black oily material. The depth of th material ranged from a sheen, up to approximately 1/2 inch and covered a to area of approximately 30 x 50 feet. There were also many areas of what appeared to be oil contaminated soil located throughout the yard.

While inspecting the yard, we were met by Mr. George Luciano, Vice-Pre Cumberland Recycling Corporation. Mr. Luciano explained that the operation this facility is t [illegible] ing and selling of scrap metals. Scrap metals are consolidated and sold. Most of the metal is bought in the form of junk auto However, just about anything including empty drums, tin and aluminum cans, metal turnings from machine shops are purchased. Most of the consolidated is sold to foreign concerns.

While we were still out in the yard, I brought the ponded oil to Mr. Luciano's attention. Mr. Douglas explained to Mr. Luciano the complicated situation which exists between the Nascolite facility and the scrapyard. I explained that oil on the ground is a violation of the Spill Compensation and Control Act. Mr. Luciano was very receptive and informed me that he would hirea contractor to clean up the ponded oil as soon as possible. A contractor list was supplied to him.

When we went back to Mr. Luciano's office, I inquired as to where he gets his scrap drums from. I was told that he gets them from just about anywhere he can and that he only accepts empty drums. Mr. Douglas brought to our attention that during a previous inspection, he noted several full drums located adjacent to the press building. Mr. Luciano informed us that these drums contained unused hydrolic oil for the metal press. Waste crankcase oil (from equipment) and hydrolic oils are placed in containers and removed by Casie Oil. Generation only amounts to less than 20 gallons per month.

There are two underground tanks on-site. The first is an old approximately 250 gallon gasoline tank. This tank was drained approximately a year ago because employees were stealing gas. It has not been used since. The other tank is two years old, approximately 3,000 gallons and used to store diesel fuel for the equipment on-site. Mr. Luciano informed me that there has been no problem with leaks on either tank and that inventory records are being kept on the diesel tank. At approximately 1210 hours, we left the site and proce to the Nascolite facility.

Nascolit ocated next to and east of Luciano's. Nascolite is not a operating faci and was recently added to the Superfund list for groundwater contamination. After inspecting this site we left and proceeded back the office.

Upon returning to the office, we met with Karl J. Delaney, Senior Environmental Specialist, and discussed who would handle this case from the aspect of cleanup of contaminated soil and installation of monitoring wells. Mr. Delaney explained that it is not current Division of Waste Management po to enforce Spill Act violations at junk yards. Mr. Douglas explained that t e is unique in that Luciano's is located next to a Superfund site. Mr. ney further explained that Waste Management does not regulate junk yards this discussion, Mr. Douglas left the office.

reference to the ponded oil, I will followup to ascertain that this material was cleaned up.

Bruce Venner
Bruce Venner
Environmental Specialist

FOS14:lk
cc:file

MEMO

NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTECTION

TO FILE - The Nascolite Corporation THROUGH Messrs. Hamilton and Patterson

FROM Joseph M Douglass, Senior Environmental Specialist, Southern Region

DATE NOV 22

SUBJECT Facilities Neighboring the Nascolite Corporation - Millville City, Cumberland County

On Tuesday, October 25, 1983, Mr. Bruce Venner of the Division of Waste Management (DWM) [illegible] this writer visited the Millville facilities relating to our ongoing enforcement case with the Nascolite Corporation. These facilities are Conrail's Millville Rail Yard, the Luciano Brothers Scrap Iron Company, Inc., and Nascolite.

We arrived at Conrail's Millville Rail Yard at approximately 10:00 a.m. The purpose of visiting this site was to check the single monitoring well at the yard for floating product, odor, etc. Mr. Harrington, the yard clerk, could not find the key to open the lock on the casing to the monitoring well. Since the phone line happened to be out at the time of our visit, Mr. Harrington was not able to make contact with anyone who might have known where the key is. I told Mr. Harrington that I would speak with Craig Curry of Conrail about this, and that he could expect to see a representative from DWR at the facility in the near future.

Our next stop was at the Luciano Brothers Scrap Iron Company, Inc. We initially went into the yard office to see Mr. George Luciano, part owner and Vice President of the company. Mr. Luciano was tied up in a telephone conversation, so we proceeded to walk through the scrap yard. On our inspection, we noted many areas of oil-soaked soil, and puddles covered with thick floating layers of oil and/or grease. In addition, we noted the presence of numerous empty, rusted drums. When Mr. Luciano finally came out to meet us, we pointed out several of the areas of particular concern to us, then walked back to his office to discuss our observations and the implications of this facility being located adjacent to and hydraulically downgradient of a Superfund site, Nascolite.

Bruce informed Mr. Luciano that the conditions we had observed constituted violations of the Spill Act, and he provided Mr. Luciano with a list of contractors capable of removing the floating product we had observed. I informed Mr. Luciano that some initial analysis of the ground water underlying his scrap yard was necessary to determine whether the operations there have impacted upon ground water quality. Mr. Luciano told us that he would cooperate with the Department, but he wanted advice on whether he should hire an attorney to represent him. I advised him that I would bring the matter of hiring an attorney up with DAG Lessne. Also, I told him that, after internal discussion, the appropriate Division would contact him to outline initial ground water monitoring requirements.

During our interview with Mr. Luciano, he revealed many points of interest pertaining to Nascolite which can only be considered heresay pending confirmation. He said that Mr. Bill Perryman of Millville had been hired to excavate the underground tanks at Nascolite. Mr. Perryman told him that some of the tanks excavated had apparently been installed as crude "septic" tanks, being perforated and emplaced over beds of stone. Mr. Luciano told us that these "septic" tanks, when excavated, were immediately cut up and hauled away for scrap by Mr. Mike Gadliardi of Mill Road in Vineland. Also, Mr. Luciano told us that Bill Perryman had been sick for three days after doing the excavation at Nascolite, and that some of the laborers working with Mr. Perryman had been asked to leave a local tavern at lunch time because of the intensity of the plastic odors emanating from their clothing after working at Nascolite.

We then proceeded to the home of Ms. Lucretia Vilano, owner of the Nascolite Corporation on Doris Avenue, Millville. We stopped at Ms. Vilano's home to inform her that we were going to enter the Nascolite property to assess present site conditions. Ms. Vilano told us that she has sold or given away most of the drums or tanks on site, and she expected to get rid of the rest in the near future. She told us that the contents of the drums or tanks would be used either for reclaimation as methyl methy-acrylate monomer or as fuel for boilers, incinerators, etc.

After leaving Ms. Vilano's home, I showed Bruce the actual plant grounds at the end of Doris Avenue. We observed a large graded area from which the buried tanks had been excavated. Only two tanks remained in this area, ranging from 5,000 to 10,000 gallons in capacity. Each of these tanks held some quantity of material and was covered with a sheet of polypropylene plastic. At one point during inspection of these tanks, the fumes became overwhelming, and I was forced to take several steps away just to catch my breath. Most of the drums previously observed at Nascolite have been removed as Ms. Vilano had indicated, with perhaps 20-30 remaining on the concrete storage area. Two of the drums observed had been recently punctured by a forklift, and had solid plastic along the sides and on the ground where the methyl methacrylate had oozed out and polymerized. The remainder of the site is unchanged from this writer's previous inspections.

After returning to DWM's Red Lion Field office, Bruce and I sat down with Mr. Karl Delaney, the Assistant Office Supervisor, to discuss which Division should handle the necessary investigation at Luciano. After we described the aforestated conditions observed at Luciano, Mr. Delaney basically told me:

1. DWM does not regulate scrap yards.
2. Floating oil and grease pose little threat to ground water because they bind in soil.
3. The priority of that office is handling spills and other such emergency incidents.
4. DWR is empowered to enforce the hazardous waste regulations.
5. After he received Bruce's report, Mr. Delaney would put his comments in writing.

I was unable to convince Mr. Delaney of my professional opinion (i. e. there is a definite threat to ground water, the site needs investigation because of its proximity, and hydraulic connection to Nascolite scrap yards should be regulated as is any other waste producing industry, etc.). As I was obviously not in a position to dictate Department policy, and since it was apparent that I would make no progress by continuing to argue my position, I simply told Mr. Delaney to put his comments in writing as he said he would and left.

E23:G9

cc: Joseph Rogalski
Charles Krauss
Karl Delaney
Bruce Venner
George McCann
James Hamilton
Peter Patterson

bcc: [redacted] Douglas
Region File
Central File

MEMO NEW JERSEY STATE DEPARTMENT OF ENVIRONMENTAL PROTE

TO Assistant Director McCann

FROM Joseph R. Douglass, Region VI m DATE

THROUGH: Lance Miller & James K. Hamilton

SUBJECT REFERRAL - The Nascolite Corporation
Millville, Cumberland County

The Nascolite Corporation owns and has operated an acrylic sheet manufacturin facility in Millville, Cumberland County. The facility was operated from the 1950's until early 1980, when this Division issued Nascolite an Administrativ Order requiring that Nascolite cease its process wastewater discharge. Acryl sheet production at Nascolite has never resumed.

Nascolite originally intended to contest the February 26, 1980 Administrative Order, but, on the morning of the hearing, agreed to enter into an Administra Consent Order with this Division. The Consent Order, signed on September 28, 1981, required Nascolite to:

A. Install three ground water monitoring wells.

B. Sample each monitoring well twice, and have each sample analyzed for odor, pH, chloride, MBAS, phenols, COD, methyl methacrylate, and a GC/MS scan, and submit the laboratory data to this Division.

C. Remove accumulated wastewaters, sludges, and contaminated soils from the ditch behind the facility.

D. Notify NJDEP in the event that plant operations were to resume or in the event that the corporation or subject property were to be sold.

E. Pay to NJDEP a modified civil administrative penalty in the amount of $1,250.

Nascolite complied with every order requirement except that they never had the ground water samples analyzed for the GC/MS scan. This analysis would ha indicated the presence, identity, and quantity of any organic compounds in th ground water. Nascolite may have neglected to have the GC/MS scans done because of the considerable cost involved, or because they suspected that the scan results would indicate the presence of severe organic contamination in t ground water. Regardless of the reason, Nascolite has not fully complied wit the requirements of the Consent Order, and is subject to further enforcement actions for this non-compliance.

The Division has independently accumulated a substantial quantity of ground w monitoring data which confirms the existence of a severe ground water polluti problem at Nascolite. Volatile organic contamination has been found in exces of 24,000 parts per billion. Nascolite denies any responsibilty for this ground water problem, and blames it on their neighbors, which include Conrail and the Luciano Brothers Junkyard. While these neighbors may have contribute manufacture of plastics or other synthetic materials, which would lead one t believe that they came from Nascolite. The entire plant site still has a strong plastic odor, and there are many potential areas within the plant grounds from which the pollutants could have entered the ground water. Thes include numberous drums, trash dumps, subsurface material holding tanks, tanker trailers, subsurface fuel tanks, etc. The contaminants could have bee released by leaks, spills, plant washdowns, intential dumping, or a combinat thereof.

Ground water is the sole source of potable supply for the immediate area surrounding Nascolite. One utility well on the neighboring Luciano property has already been affected by ground water contamination. If this pollution problem remains unchecked, it may spread down-gradient in concentrations hig enough to endanger the health of local consumers. From an aerial photograph, there appears to be almost 100 residences, including a mobile home park, within 1 mile hydraulically down gradient of Nascolite.

Nascolite should be required to obtain the services of a competent professio hydrogeologist to define the cause(s) and extent of the ground water pollutio then to design and implement a program of ground water decontamination. The are many possible options in this area, so a specific proposal can not be ma at this time. The Division will review Nascolite's proposal in this matter, and determine its adequacy. In the event that Nascolite refuses to cooperat in this effort, [illegible] litigation should be commenced to secure from Nascolite the assets necessary to perform the ground water decontamination ourselves.

Please assign this matter to DAG Lessne for handling, as she was involved in this matter and negotiated the signing of the Administrative Consent Order.